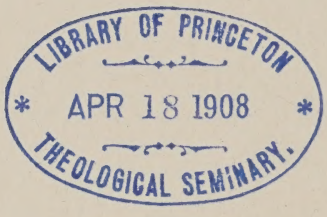

Division HB201

Section .D24

VALUE AND DISTRIBUTION

Value and Distribution

A CRITICAL AND CONSTRUCTIVE STUDY

By
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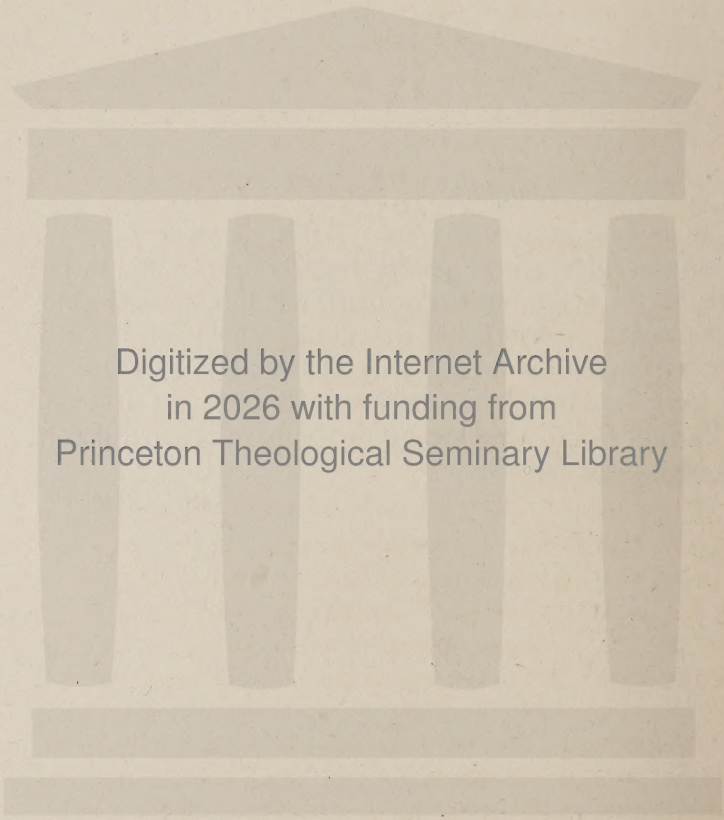
To J. Laurence Laughlin:

In a field so controversial as this of value doctrine, identity of interest is no pledge of agreement; much, therefore, in the following pages must fail to command your acquiescence. Nevertheless, I venture to hold you in some sort responsible for the existence of this book, by virtue of the very fact that it has been only through the freedom of thought and of teaching which you have fostered that it has been made possible.

THE AUTHOR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PREFACE

Were it ever important to decide in what degree, if at all, a writer may claim priority in the development of doctrine, the task would be a peculiarly difficult one in the case of the present book. The truth, however, rather than any personal ascription of it being the important matter, it becomes worth while to reflect that for several decades and, indeed, in the main since the time of Adam Smith, economic theory has been in possession of doctrines enough for a reasonably complete, consistent, and logical system of thought—if only these doctrines had been, with a wise eclecticism, properly combined and articulated.

The emphasis in the present volume upon the entrepreneur point of view in the computation of costs and in the analysis of the process by which distributive shares are assigned, has nothing new in it; it was necessary only that the point of view be clearly distinguished, consistently held, and fully developed.

The present writer has emphasized opportunity cost; but this doctrine is everywhere implied in economic discussion; the marvel is that it has been there only unconsciously or half consciously. As far as the present writer is informed, D. I. Green was the first to formulate the doctrine in entire definiteness—the present writer the first to give it systematic application.

To making precise the concept of profit and to elucidating the relations of profit to cost some contribution has perhaps been made in the present book.

The insistence that rent is a part of cost of production, in full parallel with other outlays, follows necessarily from the acceptance of the entrepreneur point of view; the doctrine is as old as entrepreneurship. Nor is it new in economic discussion; political economy began there, but

wandered afield in search of labor determinants of value and of labor standards of value measurement. Cannan has perhaps best led in the return to the better way.

The cancellation of the distinction between value-determined and value-determining costs was inevitable when once this return was accomplished.

Likewise there is little in the marginal analysis that can be offered as new; Ricardo applied it fractionally; the moderns have merely extended the applications: it only remained to point out some aspects and limitations of its service.

Precisely so of utility and of its modern refinements; but the relativity of utility on the demand side, and of cost on the supply side, of the market equation, has seemed in especial need of emphasis. But on the demand side all this was fully worked out by Marshall twenty years since.

The competitive entrepreneur rendering of the capital concept was fairly well held as far back as the work of Say and of Malthus: Clark, Fisher, and Fetter have contributed greatly to the widening of the concept of capital *socially considered;* Cannan and Veblen to the individualistic emphasis: the elaboration of the loan-fund doctrine was perhaps left still to be done.

Interest theory, in that formulation which, by title of adequate recognition, systematization, and development, Fetter has rightly made his own, is traceable at least as far back as Say; was adequately formulated—but the result of it unseen—by Wieser and by Clark, and was by the latter valiantly battled for. But, as it seems to the present writer, the relations of concrete productivity to time discount are impossible of explanation otherwise than with the acceptance of the competitive rendering of the capital concept, and with the recognition of the loan-fund subdivision of competitive capital.

Something also has perhaps been accomplished in these pages toward the elucidation, for working purposes, of the distinction between the primary and the secondary dis-

tributive processes and of their interactions; nothing very serious appears to be the matter with present society from the point of view purely of the traditional production distribution; the difficulties mostly relate to the secondary process.

Evidently, then, if anything worth the doing has been accomplished here, any implication of which the author would disclaim further than is inevitably implied in getting oneself published, this cannot be so much in any contribution of new doctrine as in the selection, delimitation, and articulation of the old. To this end the necessary thing has, in the main, seemed to be to rid the science of doctrines that do not belong in it, e. g., labor-time, labor-pain, utility, and marginal-utility determinants or measures of value; real costs; marginal fixation of price or of distributive shares; price-determined and price-determining costs or distributive shares; instrument margins; marginal-productivity distribution; price measures of utility; the social organism; fundings of productive agents; the tripartite classification of productive factors.

And if all, or any considerable part of this, has really been accomplished, it is enough.

CHICAGO, AUGUST 10, 1907

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CHAPTER I

VARIOUS COST CONCEPTS

The scientific development of economic theory began with the attempt to solve the value problem. Almost all early doctrine was cost doctrine in some one or other of its protean aspects. With the earlier writers of the classical school, cost was prevailingly interpreted in terms of labor; but in the detailed working-out of the value problem and of its further development, the notion of cost came to be presented in practically all of its different and conflicting senses. A brief analysis of the various ways in which the cost concept was employed in classical discussion will, then, afford a serviceable introduction to the value problem. The work of Adam Smith will be found surpassingly well adapted to the purposes of this analysis.

Labor-purchase cost.—The doctrine of the earlier economists that labor is the original source of value contained, even at that time, nothing especially novel or recondite; so much had been announced long aforetime and upon very excellent authority: "In the sweat of thy brow shalt thou eat bread." He that will not work neither shall he eat. Labor and the hire of labor appear both ideally and practically to have an intimate association. What one gains at fishing or hunting depends mostly or largely on the quality and zeal of the quest. Give Crusoe his island, and what he will get from it will depend upon the sort of person that Crusoe is—his industry and intelligence, in short, the quality of his work. Set a group of colonists upon its newly found island or continent; what gets accomplished there, the results achieved, the well-being attained, will depend upon the more or less of productive effort applied. Product is readily thought of as so much commodity purchased at the price of effort, a primitive transaction

in exchange—in the long run also, a method especially satisfactory in character and naïve in its simplicity of justice, where deserving and receiving tend to fall out in strict proportion. At any rate, such is the gist of the doctrine stated by Adam Smith: "The annual labor of every nation is the fund which originally supplies it with all the necessaries and conveniences of life." Therefore, accordingly as this output "bears a greater or smaller proportion to those who are to consume it," is the nation better or worse off.[1]

> Labor was the first price, the original purchase money, that was paid for all things. It was not by gold or by silver, but by labor that all the wealth of the world was originally purchased; and its value to those who possess it and who want to exchange it for someone's production is precisely equal to the quantity of labor which it can enable them to purchase or command.[2]

It must be noted, however, that his view of the case may be taken to express merely a social or collective aspect of the labor-value doctrine, the national income being regarded as the return upon the national productive energies applied as a unit to the national environment. The terms of procurement, the purchase outlays, are the efforts applied. This reasoning is equally applicable to a Crusoe economy; the income, the wage, the remuneration, is obtained as a result of the labor put forth; nothing need be implied, possibly nothing can safely be deduced, as to the exchange relations to be established between different portions of the product obtained; but conceiving this product as a unit total, the labor stands as the cost with the product as the produced value. This may be termed the labor-purchase concept of cost.

Labor-time cost.—But if a basic measurement of value and a method of comparison of different value items be sought, and if it be asked by what method, in this sense, is labor to be taken as cost, other notions emerge. Measurement by the hour or by the day lies most readily at hand. The isolated producer would find time the most

[1] *Wealth of Nations,* "Introduction."

[2] *Ibid.,* chap. iv.

simple and practicable common denominator of costs. So a collectivist community, especially were it of a democratic habit of thought, would incline to apply the labor power at its disposal, and to distribute the product, according to units of time.

Labor-pain cost.—But whether or not a collectivist society could practically do better than this, and whether for ordinary purposes Crusoe would attempt anything further, it is certain that in exceptional cases the isolated producer would add some modifications; the crude time reckoning would be amended to allow for considerations of especial hazard or severity or irksomeness. Combinations of the hazardous with the pleasant, e. g., the hunt as against the safe but tedious processes of agriculture, would inevitably present themselves. For, after all, the essential fact of time cost is not the time aspect pure and simple, but the burdensomeness involved or the disinclination overcome. As soon, therefore, as the concept of cost receives a more careful analysis, pain cost will, at least in the individual computation, be found fundamental to time cost.

Put in other form, the form which, as we shall see, Ricardo would have especially chosen, the notion would run something as follows: the purpose of productive activity is the attainment of the means of pleasure; pain is the cost of getting pleasure and may therefore serve adequately to express the relative values of these pleasures obtained or of the facts or media through which the pleasures are obtained. And it is thus that Ricardo came to distinguish so sharply between riches and value; with riches the emphasis is upon utility; with value it is upon cost.[3]

[3] "Value depends . . . . on the difficulty or facility of production. The labor of a million men in manufactures will always produce the same value, but will not always produce the same riches. . . . . A million of men may produce double or treble the amount of riches, of "necessaries, conveniences and amusements," in one state of society that they could produce in another, but they will not on that account add anything to value. . . . . Riches do not depend on value."—Ricardo, *Political Economy* (Gonner), chap. xx.

Labor-value cost.—But inasmuch as labor involves, or at all events commonly implies, some degree of pain, is it not logical to conceive of the attendant pain as the necessary condition to the existence of labor—the purchase price on terms of which one comes into possession of his own labor power? Just as, in getting control of the services of others' labor, one makes a sacrifice of purchasing power—good or money—precisely so one may be conceived to hire or buy his own labor effectiveness on the terms and at the charge of the pain attendant upon labor. Based, therefore, upon its cost, it has been found possible to ascribe a value to labor itself irrespective of the value of the product, which basic value may be conceived as carried over to the commodity produced, and as incorporated as a cost therein, the value of the product being the incorporated labor value consumed in the process of production. Obviously this view goes further than the labor-pain-cost theory: the labor-value-cost theory explains value not merely by the pain of labor but by ascribing to the labor itself, because of the pain, a value fundamental as cost to the value of the thing produced.

Closely related to the foregoing, and with difficulty distinguishable from it, is another concept of labor value: Life being essentially activity in conjunction with consciousness, and economic products being the concrete and objective resultant of this activity with its associated and attendant pain, labor appears to take on value by virtue of the fact that labor is the very expression and incorporation of life itself. Value in products is thus conceived as tracing back, through the value of labor as cost, to the thought of draft against life and of expenditure of life; product thereby bears value as the simplest case under the doctrine of costs.

All of these computations of cost are, however, open to the objection that they are over-simple in the conditions

assumed: no provision is made for production under the capitalistic wage system; on the contrary, each case is taken as one of independent production, of self-employment. A new classification of costs is therefore to be made, accordingly as the case is one of *employer cost* or of *employee cost.* The concept of labor-pain cost does not readily find place for itself under the system of entrepreneur production. Typically and at its simplest, employer cost is *outlay cost;* employee cost, on the other hand, must, if it apply at all, resolve itself into some one or other of the aspects of labor cost.

But even for cases of independent production, the foregoing analysis fails of adequacy in omitting to take account of capital-use and instrument-use costs and of other charges not necessarily included under the head of outlays. What disposition shall, for instance, be made of the item of compensation for the time use of that part of the entrepreneur's circulating or floating capital employed as wage fund in the hiring of laborers? Here, then, we have also a *capital-use cost,* whether this be regarded as risk cost or as interest cost or as a composite of both.

But if, outside of risk and upkeep, a compensation is to be computed for the owner of saved wealth, upon what basis shall this computation be made? If the capitalist entrepreneur is, so far as his capital is concerned, to be remunerated for the restraint implied in non-consumption, for the saving involved in capitalization, we arrive at the notion of *abstinence cost.* If, however, the rewards are better figured upon the basis of what the capital might have earned if lent out, we must take account of a *loan-interest-displacement* or an *investment-opportunity cost.*

And if, on the other hand, the capital charge, in the given employment, is to be rated at what the capitalist entrepreneur could have made the capital yield him in some

alternative productive use, we must make room for *capital-product-opportunity cost.*

And bearing in mind that the entrepreneur might as employee have applied his personal powers on terms of salary or wages, or might under self-employment have applied himself to some other line of production, we are compelled to catalogue, as possible cost concepts, these further cases of *personal-wage-displacement* and *personal-product-displacement* (opportunity) *costs.*

And now under the general head of employer costs are to be catalogued some further concepts acceptable accordingly as cost notions have received modification through various theories regarding the determination of wages, rent, and interest.

Wealth having been conceived as the product of labor, and capital as stored-up wealth devoted to further production, interest has sometimes been regarded as the indirect payment of wages; and the different notions of labor cost —time, pain, and value—have been employed as the ultimate explanation of interest, thus reducing it to the common denominator of pain.

But evidently there must cut across this line of analysis the distinction between employer cost and employee cost—that is, between cost to the borrower and cost to the lender. If interest is indeed wages in disguise, that which is time or pain or value cost to the producer of the capital must be *outlay* or *investment-opportunity* or *product-opportunity cost* to the borrower.

In this last sense, also, there is room for argument for the establishment of an investment-opportunity or product-opportunity cost with reference to rent outlays; more than mere mention of this notion is, however, impracticable at this point in the discussion.

So far as outlays in wages are concerned, it may be forcibly urged that cost-of-production influences underlie

and determine the wage level: to the extent, therefore, that labor is directly or indirectly the source of value, this view would make the subsistence-cost value of labor the determinant both of the labor value to the laborer and of the wage outlay to the employer. Under this head of *subsistence-value cost* would fall the two doctrines of *standard-of-living-wage cost* and *minimum-of-existence-wage cost.*

Without venturing to assume that no other cost concepts can be recognized in classical discussion, it may be confidently asserted that all of the foregoing concepts are to be found therein. Nor is it at present attempted to make the catalogue of cost concepts and cost distinctions exhaustive. But it is especially necessary to call attention at this point to the distinction between individual (competitive) and social (collective) costs, as of fundamental and far-reaching significance. These concepts, while not readily presented at this time, will come in later for a deal of discussion.

CHAPTER II

ADAM SMITH

After making it clear in his introductory chapter that the population of a country is better or worse off accordingly as the total product "bears a greater or smaller proportion to those who are to consume it," Adam Smith goes on to assert that, for the most part, the average share of consumers must depend upon the skill and dexterity of the labor, but also, in some part, "on the proportion between the number of those employed in useful labor and of those who are not so employed. Whatever be the soil, climate, etc., the abundance or scarcity of its annual supply must, in that particular situation, depend upon these two circumstances." And so, with any particular situation given or assumed, the labor of a nation "is the fund which originally supplies it with all the necessaries and the conveniences of life." This we have termed the labor-purchase doctrine of cost.

But it is fair to say that Adam Smith does not, at this particular point, make much of this doctrine, or attempt to apply it as an explanation of the value relations between goods. But in chapter v the step is fully taken:

> Labor was the first price, the original purchase money that was paid for all things. It was . . . . by labor that all the wealth of the world was originally purchased; and its value to those . . . . who want to exchange it for some new productions, is precisely equal to the quantity of labor which it can enable them to purchase or command.

It is, however, to be noted that the reasoning according to which labor is the first purchase price holds only when the "particular situation" is assumed; so much as this must be taken for granted as somehow given in the reckoning, a continent, or island, or country, in which the labor is put forth; and only such degree of "originality" in production can be imputed to the labor as may be worked out by regarding the situation, the habitat, as a passive rather than as an

active fact—as opportunity rather than as productive power. For whatever value there is in the distinction between condition and cause, the environment must, in this view, stand as the condition and labor as the cause. But none the less must the productive output differ with differences in environmental opportunity; the terms of the exchange between man and nature must vary with the varying opportunities for production, labor having a greater or less producing power with the varying bounty or niggardliness of the environment. And so, while, socially speaking, the labor-fund-purchase idea is a cost doctrine of the labor sort, it is such by the very fact that it is social in character and treats the whole product as a unit purchased by the whole of the labor applied. But evidently, so far as the product is taken as a whole, as a unit, and as set over against the total of labor producing it, no key is given to the exchange relations between different portions of this product. Even for the Crusoe case, his different units of effort could be represented in products of equal utility, only upon the assumption of absolute uniformity of advantages in the conditions of production, that is, upon the assumption of no extensive or intensive land differentials, and so of no law of diminishing returns of any sort. And likewise also, Crusoe himself must always remain at one level of vigor, alertness, and intelligence. That is to say, not merely homogeneity in environmental conditions, but absolute homogeneity in labor quality must be assumed, in order that either for an individual or for society the labor-fund-purchase doctrine could, as a cost doctrine, be adapted for service either as a measure or as a determinant of exchange relations. And it may be remarked in passing and as awaiting a more exhaustive discussion later, that precisely the same defects inhere in all applications of labor time, labor pain, or labor value, as cost measures or as cost determinants, unless possibly as somehow worked out from the point of view of the employer rather than of the isolated or self-employed producer.

And precisely this change in point of view is to be remarked in the chapter immediately following upon Smith's introduction. This is the chapter containing the famous pin illustration of the advantages of division of labor: perhaps, it is said, the larger application of this principle to manufactures explains the higher productivity of these as

against agriculture, and the greater opulence of advanced and manufacturing peoples as against backward and agricultural peoples.

> The most opulent nations, indeed, generally excel all their neighbors in agriculture as well as in manufacturing; but they are commonly more distinguished by their superiority in the latter than in the former. Their lands are in general better cultivated and, having more labor and expense bestowed on them, produce more in proportion to the extent and natural fertility of the ground.

But oddly enough, Smith remarks, the products are not cheaper with these better methods and time-saving devices: despite the fact that corn lands are better cultivated in England than in France, and in France than in Poland, corn in Poland is as cheap as in France, and in France as in England: "This superiority of produce is seldom more than in proportion to the superiority of labor and expense." But note the phrase, "labor and expense." Does Smith mean more labor in point of time, or merely more expensive labor, labor paid on a higher wage level? Surely—questions of density of population aside—it cannot be more labor in point of time. In fact, in view of the especially marked productiveness of manufacturing industries, it is only the choicer grades of land or of land power that can profitably be utilized; the return per unit of labor should thereby be of still more marked superiority. Thus, on any basis of labor cost in terms of time or of pain, lower rather than higher values must obtain. There is nothing for it but to shift the point of view to that of employer's outlay,—as Smith does,—to labor-value cost under competitive production, where labor value appears under the guise of wage payments commanded by labor as a productive fact. But note that, in this view, labor-value cost is not a pain or a life value, imposing as cost its value upon the product, but is merely the market value of labor as an agent of production. The case is more nearly one where the product is reflecting value back upon the labor agent.

And yet, if such is the case, it must be difficult, as Smith sees, to explain the undoubted fact that agricultural products bear often the *higher* price in the opulent country. The high value of the labor when employed in agriculture must find its explanation not merely in the high value of the agricultural product, but in the high productiveness of labor employed in manufactures.

> The labor of the rich country . . . . is never as much more productive (in agriculture) as it commonly is in manufactures. . . . . The corn of the rich country, therefore, will not always come cheaper to market than that of the poor.

The ultimate reasoning for all this is as follows: The high value productivity in manufactures necessitates that such agriculture as is followed should also be highly value productive; this high alternative productiveness imposes upon the employer a high wage outlay. Thus, in terms of employers' outlay, the higher "labor and expense" bestowed in the more opulent country affect the greater product to such a degree that the prices are often the higher in the opulent country.

That Smith worked out fully all the steps of the argument, or was conscious of all the implications of the situation as he outlined it, is obviously not to be asserted; but it is clear that he is within the field of competitive costs and of exchange values as distinguished from collective cost and social income. More than half consciously he is employing the notion of *outlay cost;* impliedly, but not consciously, he is making use of the principle of displacement-opportunity cost, in one of its most typical forms. He has, in truth, outlined a situation in which, as a question of labor investment, or of social and collective effort, labor-purchase cost, corn is cheap instead of dear, but where as a question of competitive cost it is, because of the displacement conditions, high in cost and dear in price and in exchange value.

It is doubtless on some such basis as this that, after mentioning use value, he distinguishes between *value in exchange* and *real value;* by real value is meant labor-burden value as the norm of value, that value which traces back to the ultimate cost—the *real price,* the *natural price*—

a concept which seems to waver between the labor-purchase idea of cost and the labor-value idea.

But later, in chapter v, there is a distinct enunciation of labor-pain cost, expressed as a value quantity, as the determinant of the *real value* of labor. Whatever difficulties market values may offer, Smith takes it as clear that, in the isolated economy, equal volumes of *labor* must always be of equal value to the laborer, because, possible variations in his personal equation aside, "he must always lay down the same portion of his ease, his liberty, and his happiness." One might suppose that with the assumption of a necessary uniformity of labor pain attendant upon equal quantities of labor, there is assumed a uniformity in opportunity and in product; such, however, is not the thought; no matter how great the volume of product in a day, the aggregate value will be invariable; it is the commodity units that must do the varying, since "it is their value which varies, and not that of the labor which produced them." Labor is their real price and having in itself a value, it carries this value over to the product. Here there is a distinct announcement of the labor-value-cost doctrine, and an implied and unconscious, but equally distinct, repudiation of the doctrine of opportunity cost; that is to say, the real value of the product, being irrespective of the volume of it, must the more clearly be uninfluenced by any question of possible alternative product.

In this fifth chapter, there is also some foreshadowing of the distinction between riches and value later made so prominent by Ricardo. Smith says that "every man is rich or poor according to the degree in which he can afford the necessaries, conveniences, and amusements of human life." Possibly he would himself have been puzzled to say whether the term "afford" implied the concept of fund or of flow, possessions or income; but in any case, the thought of riches rests upon enjoyment utilities as the test. However, he believes that inasmuch as under division of labor each man produces but the smallest part of what he con-

sumes, obtaining through exchange the results of others' labor, one "must be rich or poor according to the quantity of labor which he can command." That is to say, the amount of necessaries, conveniences, and amusements is, after all, reducible to terms of command of labor—a labor-purchase rather than labor-origin basis for value. So the value of any commodity that one has produced to sell "is equal to the quantity of labor which it will enable him to purchase or command. Labor, therefore, is the real measure of the exchange value of all commodities."

Noting carefully that we are now arrived at a doctrine of *exchange value* and not of *real value,* the perplexity presented by the very first line of the next paragraph will disappear; the thought here reverts to the primary, the real-value concept: "The real price of everything, what everything really costs the man who wants to acquire it, is the toil and trouble of acquiring it"—labor cost of some sort: but "what everything is really worth to the man who has acquired it is the toil and trouble which it can save to himself and which it can impose upon other people."

Here is a definite enunciation of his antithesis of *real price* to *exchange value. Real value* is the labor it took; but when once you have the thing and are estimating the quantum of it as riches, its wealth to you as a salable thing, its utility in exchange, you look simply to the toil and trouble which you can make it shield you from by imposing this toil and trouble on someone else. When you command from another his money or his goods, you are, in final analysis, levying on his labor. "What is bought with money or with goods is purchased by labor, as much as what we acquire by the toil of our body. . . . . These things contain the value of a certain quantity of labor which we exchange for what is supposed . . . . to contain the value of an equal quantity."

Thus, so far as all this may be made consistent, it means that real price or real value is always the labor of *attainment;* but whether this labor is conceived as in itself a

value, or merely as burden, is not so clear. Exchange value is the labor that a thing will by sale protect the owner from, or that in purchase it will cost the buyer, in inducing him to let go of a product produced by his own labor. And thus *exchange value* seems to have a real and ultimate basis in real value.

Sometimes also Smith seems to talk of a fourth sort of value, a value which covers the temporary disturbances and variations from exchange value. And it is added that "though labor be the real measure of exchangeable value of all commodities, it is not that by which their value is commonly estimated." Labor is so different in intensity, skill, and direction, that it is not easy to find any accurate measure; but a sort of rough equality in kind is worked out through the higgling and bargaining of the market. Popular thought, however, does not make any recourse to labor as the measure, at least no conscious recourse; most people can understand commodities, concrete palpable objects, but labor is "an abstract notion which, though it can be made sufficiently intelligible, is not altogether so natural and obvious."

All of which seems to mean that, rightly understood, it is possible to reduce labor to a homogeneous fund. Of time? Evidently not. Of pain? This also will not serve. Of value? But if this be a value dependent upon the product, and derived from the product, it is clear enough that homogeneity is attainable and is actually attained, but homogeneity only in terms of the very value that it is summoned to explain, a view which would, in the last analysis, conceive labor as *receiving* value rather than as determining it. And upon the basis that labor derives its value from the value of the product, labor is not competent to give value, unless possibly through some opportunity-cost analysis, later to receive attention.

And now we are called upon to note that Smith uses his labor doctrine or doctrines for three different purposes, purposes essentially distinct in nature, though almost hopelessly confused in the course of his discussion. At one time

labor is treated as the *determinant source* of all value, precisely as, in the mechanical sense, it is the *creative source* of some commodity products. At another time attention is directed primarily or exclusively to the discovery of a *medium of measure,* a mode of expression, a common denominator, into which values may be resolved and by which they may be made homogeneous and comparable, a standard of value expression. Or, finally, the investigation directs itself toward the discovery of a standard of deferred payments, a medium of comparison over wide intervals of time.

Selecting the third of these aspects as first in the order of discussion, it would perhaps be fair that not much be expected from a writer of the eighteenth century, in view of the confusion of tongues lasting without amelioration well over into the twentieth.

Proceeding from the general point of view of the doctrine that labor is the source and the measure of value in ordinary relations, Smith declares for labor as the ideal standard of deferred payments. But since some concrete and tangible fact, in terms of which payment can readily be made, is regarded as desirable, Smith inclines to advise, for long-time purposes, corn, and, for short-time purposes, silver, as the standard commodity.

> Equal quantities of labor will at distant times be purchased more nearly with equal quantities of corn, the subsistence of the laborer, than with equal quantities of gold and silver, or perhaps with any other commodity. Equal quantities of corn, therefore, will, at different times, be more nearly of the same value, or enable the possessor to purchase or command more nearly the same quantity of the labor of other people.[1]

It is, indeed, true "that equal quantities of corn will not do it exactly," for standards of consumption vary; other commodities, however, hold command over labor by virtue

[1] Adam Smith, *Wealth of Nations,* chap. v.

solely of their command over the subsistence of labor and in proportion thereto. Thus

> a rent reserved in corn is liable only to the variations in the quantity of labor which a certain quantity of corn can purchase. But a rent reserved in any other commodity is liable, not only to the variations in the quantity of labor which any particular quantity of corn can purchase, but to the variations in the quantity of corn which can be purchased by any particular quantity of that commodity;[2]

the dangers of departure from the labor standard are therefore squared.

Evidently this might do, if only it were safely to be assumed not only that all that laborers earn they spend in subsistence, but also that corn is the only subsistence commodity; it would then be true that other commodities could command labor only in the measure that they were exchangeable for corn; corn would, then, fall short of an ideal labor standard only in the degree that the laborer's dole of corn were a varying one.

At any rate, as Smith believes, since corn spells subsistence, corn must approximate more closely to the labor standard than would any other commodity.

Nothing is made here of a doctrine of some currency later, that wages in terms of money must rise or fall with every rise or fall in the price of corn, to the result that the laborer's corn wages must remain a practicably unvarying quantity. It is, indeed, held that in short-time relations real wages in terms of command over subsistence necessities vary widely. "The subsistence of the laborer, or the real price of labor, as I shall endeavor to show hereafter, is very different upon different occasions;" and so, while "the real value of a corn rent"—its labor significance—"varies much more from year to year" than that of a money rent,

> it varies much less from century to century. . . . . But the value of silver, though it varies greatly from century to century, seldom varies much from year to year, but frequently continues the same, or very nearly the same, for half a century or a century together. . . . . In the meantime the temporary and occasional

[2] Adam Smith, *op. cit.*, chap. v.

price of corn may frequently be double, one year, of what it had been the year before.

Thus, in general purchasing power, as tested by the labor standard, "from year to year silver is a better measure than corn," while "from century to century corn is a better measure than silver." [3]

But the attempt to find in labor a common denominator of value had this much at least in its favor—that if labor would not serve for the purpose, nothing else was at hand

[3] *Ibid.*, chap. v.

This is not the place for an adequate discussion of the general problem of the standard of deferred payments; little more, indeed, can be attempted here than to put in the interrogation points. It is, however, evident that Smith's reasoning assumes the long-time tendency of wages to approximate either to the subsistence-minimum requirement, or to the standard-of-living requirement. His argument rests upon the assumption that, over long periods of time, corn varies little in its command over labor. Presumably this stability of relation is due to the assumed connection between population increase and the necessities of subsistence or the established requirements of existence. Thus, while by improvements either in technique or in the conditions of environment, labor might for a considerable period be more generously rewarded in products, this condition, it is thought, is, after all, certain to be a temporary one, population tendencies being safely to be relied upon to take up the slack, whether that slack be reckoned as a differential above the absolute requirements for living, or above some standard of consumption below which laborers will refuse to reproduce themselves.

There may be reasons enough to condemn this attempted justification of the corn standard by the labor standard, consistently with retaining faith in the labor standard itself; it therefore remains to inquire to what extent Smith's acceptance of the labor standard was justifiable in the light of the theoretical equipment of his time, and to what extent and with what modifications it may serve for the purposes of more modern theory.

There was for Smith, at all events, this much of justification for the acceptance of the labor standard—that, in his view, to refuse it would be abandon all hope of any standard, while the acceptance of it would assimilate the standard of deferred payments to the standard of value for current exchanges—a consummation still (though perhaps for no very evident reason) devoutly desired by many monetary theorists. To Smith, as to most economists of later years, the problem of deferred payments presented itself as a value problem. Conceived as such, the degree of development of theory in Smith's time could possibly have afforded nothing better or other than this labor standard; nor, indeed, has later theory achieved anything more, so far as, for deferred-payment problems, cost and value solutions have been the object of search. For it is clear that value *conceived merely as a ratio of exchange* affords no clue to a deferred-payment standard. Only when, as the essence or significance or determinant of value, some

that would. It may not yet be clear on precisely what grounds this common denominator was so pronouncedly a desideratum; but, for whatever it was worth, the labor measure was the only thing possible for the time. And it may fairly be questioned whether later thought, in its endeavor to substitute utility for labor cost as a value determinant, thus stating the payment problem in terms of utility truly, but *only of utility as working itself out in terms of value expression,* has been able to do more upon the utility side than to repeat the error made upon the cost side, that, namely, of seeking to compare things which in their fundamental nature offer no basis of comparison; with value

underlying principle is discovered, is it possible to adopt as a deferred-payment basis a *value standard*. Whether or not the multiple standard or some variable subsistence or standard-of-living standard may not now be regarded as preferable, it is perhaps sufficient for present purposes to point out that these are standards of utility, rather than of cost or of value, and therefore do not, in strictness, concern this stage of the discussion.

But it may none the less be possible to justify the labor standard as held by Smith without appeal to value categories.

It is evident that the labor and the standard-of-living standards must in the long run come to coincide, or at all events must always be in process of approaching coincidence. The total consumption of wealth depends upon the total productive efficiency of society: average consumption is the derivative of average production. Standards of living express the general or average efficiency in production, as reflected in the habits and customs of consumption. It is, no doubt, true that if the increase in the per-capita output of wealth is rapid, the felt necessities of adequate living may somewhat lag behind the opportunity afforded by the level of production; but it remains true that the new level of production is all the while in process of becoming fixed as a new level of requirement. In the meantime, however, as the history of the last hundred years abundantly shows, there is, because of this phenomenon of lagging—this slack between the lately acquired power and the earlier established need—room for some shortening of the labor day. None the less a commodity standard of payment which should coincide with the labor standard must be a standard expressive of the changes taking place in labor productiveness; not, however, productiveness in terms of corn alone, but productiveness in terms of those commodities, whether corn or other, for which incomes are expended—that is, productiveness expressed in terms of the derived consumption.

What bearing has all this upon the proposal that the money payment should be adjusted at that sum of money affording a command over commodities equal to that of the money loaned—that is to say, the acceptance of the principle of the multiple standard?

Recalling once more the fact that this computation is entirely outside the value field, that the proposed payment is in terms a *utility* standard, it is obvious that if, between loan and payment, time enough has elapsed for an appreciable change in the standard of living, in the

conceived as a mere ratio of exchange, the assertion of equality or of inequality between two values can have, for the purposes in hand, no possible meaning, unless and until some basis of homogeneity between the quantities in the respective value ratios has been established. Thus, in last analysis, equality for deferred-payment purposes will have to be worked out by somehow appealing to concepts of quantity rather than always to mere ratios between quantities.

So much, for the time being, for the deferred-payment problem; there remain for discussion Smith's concepts of

felt necessities of consumption, payment in an equal command over commodities cannot be a full equivalent for the benefits received, or an adequate indemnity for the benefits foregone. The want-satisfying quality of objective units of goods has fallen; something must be allowed here not only for changes in the direct service, the want-satisfying power, afforded by similar items of goods, but more, also, for changes of service consequent upon the rising level of requirement for the maintenance of social position and relative well-being. It is here distinctly to be recognized that in large measure consumption is itself a competitive thing.

Neither in theory, therefore, as a value computation, nor in its practical working out as a utility computation, does Smith's labor standard afford an entirely satisfactory basis for the solution of the deferred-payment problem. "Ultimately speaking, things are not useful because they cost effort, but the effort is put forth because the things are useful. It was usefulness and not effort that the debtor borrowed, it was the product of his effort and not effort that the creditor loaned. It is, then, in terms of usefulness that payment should be made. Labor is the *producer* of utility and not the substance of it.

"But it must be remembered that by this very measure of usefulness, payment must be made in something more than an equivalent command over commodities. The increased effectiveness of labor has brought about a higher level of consumption, a raised standard of comfort and of life. This is a gain to such members of society as are able to attain to this new level; it is the reverse to those who fall [too far] short of it. A new need plus the ability to satisfy the need is an advance in well-being; without the ability the need is a misfortune. The line then of compensation—of equality in sacrifice—must be found somewhere above equality in purchasing power, somewhere below equality in command over human effort. Something must be added to payment on account of the greater necessities of the lender; something also on account of greater requirements for the maintenance of social position and relative well-being. The point of fair adjustment is to be found where the direct gain from larger satisfactions is offset by the disadvantage of increased requirements and decreased command over social distinction."—Davenport, *Outlines of Economic Theory*, p. 229.

More extended discussion of this problem must be postponed to a later chapter. See pages 175 to 188.

labor, (1) as determinant of value, and (2) as measure or denominator of coexisting values.

(1) That things are valuable more or less in proportion to the labor required in their production is matter of common observation; the Crusoe analysis sets this truth forth in simple form. But the principle is equally manifest in more complex conditions; the more the labor required for the production of any commodity the higher the wage outlay.

Not merely this; but for the simpler aspects of production, and in large measure for production generally, it may be said that products trace their origin to human labor; labor is, technologically speaking, a cause, and, in careless thinking, is prone to be taken as the sole technological cause of the existence of things possessing value. The conclusion thus lies readily at hand that the quantity of labor content is the determinant of exchange value. Labor is in this view conceived not merely as the mechanical cause of product, but as the quantitative cause of value, just as, in later thought, the utility doctrine has been applied to elucidate the causal sequence: utility being conceived as necessary condition to value, there is constant temptation to explain the quantity of value by the quantity of utility. But in either case, or in any event with labor, the necessity presents itself of arriving at some basis of homogeneity; and to serve as explanation of value this homogeneity must be something other than a homogeneity derived from the value product.

Nevertheless, the affairs of ordinary business life, the commonplace facts of the wage relation, make it sufficiently evident that labor has a value, and that in many cases, if not in all, the value of the product is somehow concerned with the value of the labor agents required in its bringing forth. The labor-value-cost doctrine is unquestionably true in the sense that the value of labor takes some part as a determinant, whether intermediate or ultimate, of value relations. But precisely here was and is the problem; is this labor value ultimate and self-sufficing, or is it merely an intermediate term in some longer chain of causal sequence? So far as Smith formulated any answer to this question, it was to ascribe to labor a non-derivative homogeneity and a non-derivative value, and to make this value serve as the explanation, in terms of causation, of exchange relations.

And so in chapter vi it is argued that if among a nation,

say, of hunters, it usually costs twice the labor to kill a beaver that it costs to kill a deer, one beaver will naturally exchange for—will be worth—two deer. It seems, indeed, to go almost without saying that what is usually the product of two days' or two hours' labor should be worth the double of that which is the product of one day's or one hour's labor.

But the further discussion makes it fairly evident that the hunter case was chosen by Smith as one of approximate homogeneity of labor power, a nation of hunters, and also, be it remarked, as a case of the relatively minor importance of capital or land considerations. And upon this assumption of the approximate or complete homogeneity of productive agents the doctrine sums up in a statement of proportionality: as quantity of labor is to quantity of labor, so is value of product to value of product; labor : labor : : value : value. And neither in Smith's nor at any later time has this been open to question, upon the assumptions made. But the truth admittedly contained in the proposition does not of necessity impose the labor-value explanation. The non-mathematical statement of the case is equally exhaustive; unless the hunter could get as much out of his labor with one sort of game as with the other, he would trap for only one sort, and all of this irrespective of any question of whether hunting be a pleasure or a hardship, or whether labor has or has not in itself a value by its own right. In point of fact this doctrine of proportion is nothing more or less than an example of opportunity cost applied under the assumption of homogeneous agents of production.

In the next paragraph, however, it is said:

> If the one species of labor should be more severe than the other, some allowance will naturally be made for the superior hardship; and the produce of one hour's labor in the one may very frequently exchange for that of two hours' labor in the other;

all of which is correct as matter of everyday fact; but note that in just so far does the proportion doctrine fail; and at the same time there disappears the last vestige of time cost. Indeed, there appears some suggestion of pain cost. And yet, by the sentence next following pain cost is excluded:

> Or if the one species of labor require an uncommon degree of dexterity and ingenuity, the esteem which we have for such talents

will naturally give a value to their produce superior to what would be due to the time employed about it—

the old labor-cost doctrine, but supplemented by a new and non-cost explanation for the evident and perplexing increment of value, the esteem in which talents are held. But in the succeeding sentence the pain-value doctrine is rehabilitated:

Such talents can seldom be acquired but in consequence of long application, and the superior value of the produce may frequently be [no?] more than a reasonable compensation for the time and labor which must be spent in acquiring them. In the advanced state of society allowance of this kind for superior hardship and superior skill are commonly met in the wages of labor.

That is to say, the greater wage must at least counterbalance, for the individual worker, the greater hardship of the work or the greater expense of preparation, else the occupation will not be undertaken or will be abandoned. But evidently this gives no explanation for the superior wages of native skill. The discussion continues: "Over and above what might be sufficient to pay for the price of the materials and the wages of the workmen"—employer's outlay cost—"something must be given for the profits of the undertaker of the work who hazards his stock in the venture." Risk cost? "The value which the workmen add to the materials, therefore, resolves itself, in this case, into two parts, of which one pays their wages, the other the profits of the employer." But that, in Smith's thought, this profit includes something more than risk profit is not open to doubt: though there is not yet any necessary suggestion of wages of superintendence: "two parts, of which the one," etc.,

the other the profits of the employer upon the whole stock of materials and labor which he advanced. He could have no interest to supply them unless he expected from the sale of their work something more than what was sufficient to replace his stock to him, and he could have no interest to employ a great stock rather than a small one, unless his profits were to bear some proportion to the extent of his stock.

This might well be justified as a doctrine of opportunity cost, but such seems not to be Smith's thought; he appears to have in mind merely abstinence cost, as a quantity additional to risk cost.

In every great work almost the whole labor . . . . is committed to some principal clerk. The owner of the capital, though he is thus discharged of almost all labor, still expects that his profits should be a regular proportion to his capital. In the price of commodities, therefore, the profits of stock constitute a component part altogether different from the wages of labor and regulated by different principles.[4]

Here Smith, perhaps with good justification, argues that abstinence cost cannot, at all events proportionately, be explained or defended as pain cost. But later this position was abandoned; and it is clear enough, if the case is looked at from the point of view of the employer—whether as outlay cost to the borrowing entrepreneur, or as either investment-opportunity or production-opportunity cost to the capitalist employer—that interest and wages must be regarded as upon the same footing.

And as we have seen, this is not infrequently the point of view of cost adopted by Smith. For example, in chapter vii he sets forth *natural price* (normal exchange value) as the general average of "what it really costs the person who brings it to market." But at the same time this price must cover the profit which the producer could elsewhere have made; "If he sells at a price which does not allow him the ordinary rate of profit in his neighborhood, he is evidently a loser by the trade; since by employing his stock in some other way he might have made that profit;"—opportunity cost.[5]

His profit, besides, is his revenue, the proper fund of his subsistence. As, while he is preparing and bringing the goods to market, he advances to his workmen their wages, or their subsistence; so he advances to himself, in the same manner, his own subsistence. . . . . Unless they yield him this profit, therefore, they

[4] Adam Smith, *op. cit.*, chap. vi.

[5] While there is no doubt that Smith in many places adopts—and never in terms repudiates—this entrepreneur-cost point of view, it is equally clear that at other times he as definitely accepts and emphasizes the labor-pain and the labor-value doctrines. Whittaker certainly goes much too far in the following: "As a theory of value . . . . Adam Smith left us an early form of the law of entrepreneur's cost and a labor-command measure of value. But he disowns what is naturally thought of as the genuine classical theory of value, that labor cost regulates market value. This theory was Ricardo's and really his alone."—Albert C. Whittaker, *History and Criticism of the Labor Theory of Value in English Political Economy,* Vol. XIX, No. 2, of "Columbia University Studies," p. 31.

do not repay him for what they may very properly be said to have cost him.

The natural price must, then, also recoup him for these expenses of living—an employer's subsistence or standard-of-living cost. True, he may not get this price, but this is the lowest price "at which he is likely to sell—for any considerable time."

But this subsistence-cost doctrine does not, after all, appear to Smith quite to suffice; the price is set forth as safely to be assumed as the lowest long-time price only upon the assumption that there is freedom of changing occupations. But where such freedom exists, it is really the principle of displacement that is being appealed to; these possible alternatives of employment offer a typical example of opportunity cost.

In this chapter vii consistent account first begins to be taken of the fact that capital and land are important agents in the productive process. Henceforward, the talk of homogeneity in productive powers ceases; henceforward, the discussion mostly goes on the basis of employer's cost as against pain or time cost; the doctrine, so far as consciously formulated, is that of outlay cost, and in the main, impliedly as well as consciously, is outlay cost as against opportunity cost.

And so, in addition to the claims of the capitalists, "as soon as the land of any country has all become private property, the landlords . . . . demand a rent even for the natural produce. The laborer . . . . must then give up to his landlord a portion of what his labor either collects or produces."

Now here, again, the land is conceived as passive opportunity rather than as productive agent; the laborer is represented as giving up a part of what in its entirety his own labor has produced. "This portion, or what comes to the same thing, the price of this portion, constitutes the rent of the land, and in the price of the greater part of commodities makes a third component part." So, from the point of view of outlay cost and of exchange value, rent, like interest, disturbs the labor-cost principle as a causal and determi-

nant fact for exchange relations, unless, indeed, it be possible to regard land and capital as substitutes for labor and as, so far, making labor unnecessary to be done or to be paid for. Formally, this would, perhaps, imply no lack of loyalty to the labor standard, loyalty, however, not to labor in terms of pain, but solely to labor in terms of pain or of something instead of pain; nor, indeed, is it, in last analysis, an insistence upon labor in any aspect, but only upon something, production-wise, a substitute for labor. And if this interchange between labor and substitutes is accepted as possible, it should be equally open to reverse the process and to regard labor as the substitute for land or capital services, thus reducing all costs to equivalents in rent or interest. But this comes perilously near to surrendering the whole labor-cost position, and to adopting in its entirety the outlay-cost point of view.

But—and now we come to an example of Smith's treatment of labor as value standard or measure—nothing of all this necessarily bears to disturb labor as the best and perhaps the only medium of expression and common denominator of *real value*.

> The real value of all the different component parts of price, it must be observed, is measured by the quantity of labor which they can, each of them, purchase or command. Labor measures the value, not only of that part of price which resolves itself into labor, but of that part which resolves itself into rent, and of that part which resolves itself into profit.

Here evidently, the thought is simply and purely one of measure—of standard—and not of cause. But a shift in concepts has nevertheless taken place—a shift later to be exploited at the full by Malthus—from labor as the basis of value by virtue of the labor-pain investment, to labor as basis in terms of pain-purchasing power or of pain-avoiding power—ultimately, therefore, of service-rendering power.[6]

[6] Thus the following states only one of the two positions held by Smith with regard to the labor standard: "To Smith, labor is the great, homogeneous, undifferentiated common denominator to the wonderfully diverse mass of goods which come into existence out of it, and the value or 'real worth' of each of these goods follows the quantity of the source-stuff turned to its production."—Whittaker, *op. cit.*, p. 34.

In chapter vii it is written that,

> when the price of any commodity is neither more nor less than what is sufficient to pay the rent of the land, the wages of the labor, and the profits of the stock employed in raising, preparing, and bringing it to market, according to their natural rates, the commodity is then sold for what may be called its natural price.

There is here no attempt to explain these natural rates, either as costs to the employer or as incomes to the owners; they are simply normal or natural rates, and the produced commodities incorporate these rates into the natural cost, with the result that the corresponding price is the natural price. There is here, however, unconsciously but necessarily implied an opportunity-cost analysis, as the explanation of these existing rates of compensation to which, as costs, the production of every particular commodity is subject. And this opportunity doctrine is, in fact, recognized, so far as the employers' profits are concerned:

> Though in common language what is called the prime cost of any commodity does not comprehend the profit of the person who is to sell it again, yet if he sells it at a price which does not allow him the ordinary rate of profit . . . . he is evidently a loser by the trade; since by employing his stock in some other way he might have made this profit.

But in the paragraph next following appeal is made, as we have already seen, to the doctrine of subsistence cost:

> While he is preparing and bringing the goods to market he advances to the workmen their wages, or their subsistence; so he advances to himself in the same manner his own subsistence which is generally suitable to the profit which he may reasonably expect from the sale of his goods.

It is now to be remarked that here the standard is one not of necessary subsistence, nor accurately one of permanent and established standard of living, but a sort of short-time standard based upon the expected profit: but the standard serves for the purposes in hand as does the laborer's wage; it is the amount necessarily paid, or at all events the amount actually paid to one of the producing agents—outlay cost. However, Smith is not faithful to this concept; nor can he well be so, for evidently one is not held to consume all of his profits; and whether he does or does not consume them all, and whether they are great or small, it is

probable that he will take them if they are the best that he can get.

> If at any time it [the supply] exceeds the effectual demand, some of the component parts of the price must be paid below the natural rate. If it is rent, the interests of the landlords will immediately prompt them to withdraw a part of their land; if it is wages or profits, the interests of the laborers in the one case and of their employers in the other, will prompt them to withdraw a part of their labor or capital from this employment.[7]

This is opportunity cost so extended as to include all forms of outlay of productive goods or for productive goods, rent included; and the same argument is applied in reverse order to higher prices. Smith proceeds: "The natural price is, as it were, the central price, to which the prices of all commodities are naturally gravitating."

However, Smith's ideas as to the relation of rent to cost and to price were especially and notoriously vague and vacillating. In chapter ix, the rent of land, these notions of outlay cost and opportunity cost get, so far as rent outlays are concerned, a serious back-set:

> Rent enters into the composition of the price of commodities in a different way from wages and profit. High or low rent is the effect of it. It is because high or low wages or profit must be paid in order to bring a particular commodity to market that its price is high or low; but it is because its price is high or low, a great deal more or a little more or no more than what is sufficient to pay the wages and profits, that it affords a high rent or low rent or no rent at all.

This distinction between rent outlays and other outlays can evidently not greatly signify from the point of view of outlay cost. But there is another point of view from which the distinction is important. Rent arises only as a question of individual and competitive cost. Socialized production would meet with land differentials, but the aggregate product would stand as the aggregate remuneration for the total social outlay and effort: some of the product would, it is true, have required less outlay than other; but if any system of exchanging, by barter or otherwise, existed, these differences in land quality could have no significance for the terms of the exchanges; nor could they figure as additions to cost; at the most, as differentials, they would only

[7] Adam Smith, *op. cit.*, chap. vii.

be differentials of *saved cost*. But in a competitive society these differentials of productivity have to be paid for under the guise of outlays made for the privilege of enjoying them. So again, but for a different purpose, we return to the distinction between competitive and collective cost. Every improvement in production, whether of developing technique, or of better land, or of more abundant land, or of better capital or more abundant capital, is, from the social point of view, the occasion and cause of diminished labor cost—a larger product for a given total of production burden.[8]

[8] Note, however, that this discussion of collectivist labor cost has in view only such productivity differentials as concern only one line of products. But commonly, of course, differentials of quality for, say, wheat production are accompanied by differentials for other lines of product. In such cases another cost computation requires attention in the collectivist reckoning. Displacement cost—opportunity cost—is really the leading and almost the exclusive form of cost for collectivist economics. Labor cost is, in fact, of extremely small significance, excepting in this aspect of alternative applications. All that the text intends to assert is that instrumenal differentials of productivity *for any one line of production* can have no significance in collectivist computations.

CHAPTER III

RICARDO

At the present day it is a task neither of great difficulty nor of great merit to convict Adam Smith of inconsistency and even of direct contradiction. Were the purposes here in view essentially those of criticism, it would thereby be the more necessary to keep in mind that the strength of Adam Smith lay in his breadth of information, his accuracy of observation, his suggestiveness of comment, and his catholicity of doctrine. He was not in his time, and could hardly have been in any time, a close worker in systematic theory: He failed to see the town for the houses, the forest for the trees; but he knew wondrous well the houses and the trees. His habit of mind was concrete and practical. Despite, however, this consistent practicality, almost every theoretical aspect of every question struck him at one time or another. In economic doctrine, as has been said of Shakespeare in observation of life, the ocean of his sympathy lapped all the isles of thought. For the present purposes, therefore, which are, in the main, expository and analytic rather than historical or critical, Adam Smith offers an incomparable field for profitable discussion and illustration.

Not precisely so with Ricardo or with his contemporaries, Malthus, James Mill, and MacCulloch. Ricardo was in purpose and method a systematizer, with a theorem to expound and a theory to establish; consistency and logical coherence were parts of the task to which, despite slight equipment in style and in expository skill, he had set himself; and in this purpose, so far as consistency and logical unity were concerned, he was, on the whole, surprisingly successful. His defects of exposition, however, render the task of interpretation especially difficult: it may thus be possible that one more attempt at restatement and reinter-

pretation of his doctrine may be serviceable, even after the sympathetic and masterly and, in the main, definitive study of Mr. E. C. K. Gonner.[1]

Very confusing in Ricardo's discussion is the fact that there are two senses for each of the terms *value* and *value of labor; value* meaning (1) real value, in the sense of labor-investment value—concreted pain cost; (2) power in exchange. *Value of labor* sometimes means (1) mere exchange power, market value of labor; (2) labor as a ratio to profit, a distributive fraction, a relative share in a product the absolute value of which is irrelevant to the concept.

And thus with regard to the famous proposition that neither wages nor profits can rise or fall unless to the corresponding loss or gain of the other factor, James Mill makes it clear that this is never asserted by Ricardo except in the sense of relative shares:

> If a change in the amount of commodities is meant, it will not be true, in that sense, that profits so depend upon wages as to fall when wages rise, and rise when wages fall; for both may fall and both may rise together. And this is a proposition which no political economist has ever called in question.[2]

But note that in the sense neither of exchange power nor of ratio shares does Ricardo commit himself to the doctrine that the value of the labor is derived from the value of the

[1] All references are to Gonner's edition of Ricardo.

[2] James Mill, *Elements of Political Economy* (3d ed., London, 1844), chap. ii, sec. 3.

"Ricardo never asserts or imagines that wages and profits cannot increase together, *so far* as the amount of commodities that measure them is concerned. . . . . What he denies is that one can obtain a larger share of the total value without the other experiencing a diminution in its share."—Gonner (Ricardo): "Introductory Essay," sec. 15.

"Each commodity represents a certain amount of force, and thus the total quantity produced represents the total force of the country. Should invention facilitate production . . . . each commodity subject to the invention must cease to represent as great an amount of force; . . . . in other words, its real value would be less."—*Ibid.*, sec. 9.

product. His is consistently a cost-of-production view. But he equally carefully avoids making the exchange value of the labor the cause, through costs, of the exchange relations of the products. He does not deny that labor has value; this is as clear as that land has value: but with land he denies, and with labor he declines to assert, any cost-causal relation. To grasp this point is crucial to any right understanding of Ricardo. He has no explanation for the value of labor excepting by the necessities of living according to the established standard, a sort of cost doctrine for labor. He terms labor the "foundation of *exchange value;*" it is the very essence and significance of *real value*. Exchange values are merely proportional to real values. "The connection between exchange value and so-called real value is simple. On the degree to which a commodity as compared with other commodities is possessed of the latter, depends its position in the ratio of exchange." [3]

Labor is conceived by Ricardo as a leveler of exchange value, and this solely through the efforts of holders of it or of purchasers of it to apply it at the maximum of advantage. It is true that the working-out of this by entrepreneurs is in terms of cost to them but, according to Ricardo, their computations do not express the ultimate fact; cost is not decisive excepting in this sense of proportionment; production costs in the ordinary sense depend upon real costs, that is, upon the quantity of labor applied; and so the doctrine formulates, value: value: : cost (=labor): cost (=labor). And it thus comes about that labor, the basis and essence of real value, may serve as a standard and common denominator of exchange value. In final analysis, labor does not determine value through its own value, but merely determines, by the proportion of it incorporated in different commodities, the relations of exchange value between these commodities. Labor might halve or double in productive power, and yet no effect be felt in the ratios

[3] *Ibid.*, sec. 9.

of exchange. So wages might vary indefinitely in rise or fall without modifying these market relations:

> No alteration in the wages of labor could produce any alteration in the relative value of these commodities. . . . . The same reasons which should make the hunters and fishers endeavor to raise the value of their game and fish would cause the owner of the mines to raise the value of his gold. . . . . The relative situation being the same before and after the rise of wages, the relative . . . . value would remain unaltered.[4]

But if the labor quantities change relatively, changes will follow in value.

> Every improvement in machinery, in tools, in buildings, in raising the raw material, saves labor and enables us to produce the commodity to which the improvement is applied, with more facility, and consequently its value alters.[5]

In what direction Ricardo would look for the explanation of all this may not be clear; but it is certain that he does not find it in any invariability in the value of labor. Labor does vary both in ratio value, its share relative to profit, and in commodity-purchasing power, its exchange value:

> Therefore it cannot be correct to say with Adam Smith "that as labor may sometimes purchase a greater and sometimes a smaller quantity of goods, it is their value that varies,"—but it is correct to say that the proportion between the quantities of labor necessary for acquiring different objects seems to be the only circumstance which can afford any rule for exchanging them for one another.[6]

Nor would Ricardo have concurred in the assertion of an invariable *real value* in labor; but only of invariability in the exchange relations of things invariable in their relative labor content. Labor value as *reality* in contra-distinction to labor value as an exchange fact, Ricardo did not recognize, or, for that matter, deny; he had no need for the distinction. For any purpose of his the value of labor is

[4] Ricardo, *Political Economy*, chap. i, sec. 3, par. 16.
[5] *Ibid.*, chap. iv, par. 18.
[6] *Ibid.*, chap. i, sec. 1, par. 10.

variable; "being not only affected as other things are by the proportion between supply and demand . . . . but also by the varying prices of food and other necessaries on which the wages of labor are expended." [7]

But how does this proportion doctrine, this function of labor as a leveler of values, come to be in any sense a cost doctrine, or justify the repute of Ricardo as the great cost-of-production theorist? As generally interpreted, and by his own express assertion, he holds that the value of any given article depends upon its cost of production; but the connection between labor cost and cost of production in the sense of outlay cost comes about through the entrepreneur working-out of the proportion principle. As regards the value of any one commodity, its cost, its selling-price, the mere outlay investigation would be an adequate solution; with wages so much, materials so much, etc., the price would have to be so much. But Ricardo was attempting to see the value problem whole, not merely as a question of this commodity or that, considered separately—a purely individualist-entrepreneur standpoint—but of all commodities taken together in their interrelations of exchange. For this purpose the various cost outlays would not serve as a basis of explanation, but would themselves be simply so many more items of fact awaiting each its separate explanation.

Summarizing, therefore, the case as thus far stated, we may say that Ricardo makes labor important only as the basis and inner meaning of *real value*. The doctrine of

[7] *Ibid.*, chap. i, sec. 1, par. 9.

In view of Ricardo's distinction between value and riches, as set forth in chapter xx, it must be admitted that the above interpretation might fairly be questioned. But in a letter to Say, dated January 2, 1820, Ricardo writes: "You seem to me to have misunderstood one of my propositions. I do not say that it is the value of labor that determines the value of the product; this is a view which I am trying with all my power to refute. I say that it is the comparative quantity of labor necessary to production which determines the relative value of products." [This is translated from the French; I have not been able to place my hand upon the original, which I take to have been in English.]

real value is still everywhere a cost doctrine of the labor sort; the purpose of activity is to secure pleasure or to avoid pain; in either case, pain is the method and the price of attainment, the cost, and thereby an expression of the value of the thing or fact attained, or of the external agent or implement affording it. Thus it comes about that Ricardo distinguishes sharply between riches and real value; with *riches* the emphasis is upon quantity of utility, of weal; with value, upon cost.

All of this, as we have seen, falls under the head of *real value*. But for exchange value he recognizes that, even in the simplest cases, labor gives only a method of arriving at relations between commodities, their exchange ratios; it is a measure in this sense only, and comes to serve as such only through the leveling influence of costs, by virtue of the constant tendency on the part of producers to apply labor at its greatest advantage. Pain cost has here nothing to do with the case, excepting as pain may have something to do with the sums which must be paid for labor in order to get it. Neither labor, nor pain as in some way implied in labor, has any significance for exchange value otherwise than as standard or measure or common denominator. An indirect significance is worked out only through the leveling or proportioning mechanism.[8]

In point of fact, with all the Ricardian group, as with Smith, the desideratum in the exchange-value problem was to get at a measure; the real-value doctrine was

[8] In the light of the foregoing, sharp dissent must be expressed from the view of Ricardo held by Whittaker: "Ricardo contributed very little to the advancement of the empirical, that is, the entrepreneur account as such. The direct line of descent of this doctrine is traceable from Smith's *Wealth of Nations* through the *Principles* of Malthus and J. S. Mill to Marshall. Neither Ricardo nor Cairnes can be considered to stand in the line. . . . . Ricardo never stated a law of entrepreneurs' cost plainly, formally, as such, though he gave it an obscure recognition as a source of difficulty to the pure labor theory of value" (Whittaker, *op. cit.*, pp. 14, 15).

The following appears to be by much the more accurate statement: "Ricardo's real conception of normal value is this: the total cost of a commodity determines the total wages charges that must be paid by the entrepreneur, or series of entrepreneurs, producing it" (*ibid.*, p. 51).

sufficient for more fundamental consideration of causes, and as bottoming economics upon some final, definitive, and underlying substratum of reality. If land, the Physiocratic basis, was discarded, what else could serve, if it were not labor? In view of the comparative utility of water and wine, or of corn and gold, and in the absence of any notion of marginal utility, utility could not serve for the case—whether or not we shall now say that the required homogeneity has later come with the marginal notion. And even if utility could have been made to apply, this was not that bed-rock of reality which was in quest. And so much the more this search for the ultimate could not content itself with simple exchange ratios. Ratios of what? Determined by what? A mere ratio of exchange was as if a man should stand firmly, resting neither on one leg nor on the other, but held upright by the mutual support of the two. Possibly the situation was of this sort for the moving equilibrium of the heavenly bodies—tied to nothing and upheld by nothing—but if so it was admittedly not greatly to their credit. The only exit from the dilemma appeared to be by the way of labor, as definitive and real, causal and determinative.

But for exchange value, nothing of the sort was claimed for labor, but only that it was adapted to serve in the second of Adam Smith's rôles, that of value denominator.[9]

It must now be admitted that Ricardo's essential position that commodities rise or fall in exchange value in

[9] Malthus concurring in this notion that a common measure for value must be discovered, and that labor offered the only hope, was yet disposed to disagree with Ricardo and to adopt not the common denominator of labor in the cost aspect—by test of what had been done, a system of byegones—but by the forward-looking method of what the product, once produced, would command in labor or in the products of labor.

For clearly, said Malthus, if a manufacturer really makes a profit, he must get back for his product the power to control more productive energies than he put into his commodity. If the less labor of today will now do the work of the more of yesterday, an equal control of labor must imply a profit. It is the purchasing power of any product that really signifies to the producer of it, and if labor is agreed to be the measure-medium, it should be so in the sense of labor-purchase rather than of labor-investment. True, these quantities may commonly coincide, but if the coincidence fails, the preference should be accorded to purchasing power.—T. R. Malthus, *Political Economy,* chap. i.

Possibly so; but it is sufficient, for our present purposes, to point out that Malthus is here vaguely feeling toward the utility measure of value; that is to say, his doctrine is fundamentally not a cost doctrine.

proportion to the rise or fall in the labor requirement in their production would hold, if (1) labor could be reduced to homogeneity excepting in terms of value productivity, and if (2) the doctrine could be made to account adequately for the rôles of land and of capital in production.

As to land, Ricardo felt no considerable difficulty. He ruled rent out of the problem, by a course of reasoning familiar to all economists and still commonly accepted. It is unnecessary to inquire here whether modern theory has done well in accepting this Ricardian doctrine as to the relation between rent costs and values—there is much waiting to be said in this regard,—but it is certain that Ricardo did not do well in attempting to fit this doctrine into his general system. His doctrine of cost was one of competitive and not of collectivist cost; it was worked out in terms of entrepreneur competitions by the sheer necessity of its character as competitive; the doctrine of the proportionment of value to labor, the leveling doctrine, finds its basis in the principle that each entrepreneur will use his costs, as a total, in the way to get from them the greatest total of exchange power. In short, Ricardo's doctrine of proportion was worked out through the entrepreneur mechanism and was nothing more or less than competitive opportunity cost; and had he only furnished the doctrine forth with an apparatus of margins and of producers' differentials, and had he disposed of rent, as well as of interest, by frankly and freely making room for both within his formula, much in modern value theory might have been other—and better—than it is today.[10]

However, there would of course have remained the old difficulty about the homogeneity of labor; and a new difficulty would forthwith have arisen—how to make land costs homogeneous with labor costs, otherwise than on the seemingly question-begging value basis. And then, again,

[10] Malthus' view was more consistently in line with the entrepreneur-cost concept: "It appears to me essential . . . . to say that the cost of producing any commodity is made up of all the wages, all the profits, and all the rents which . . . . are necessary to bring that particular commodity to market in the quantity required" (Malthus, *op. cit.*, 1st ed., pp. 102, 103).

"Malthus proceeds to a thorough criticism of Ricardo's law of labor cost. . . . . There are (1) the temporary alterations of prices too rapid to be met by changing the volume of production; (2) monopoly in the product itself, or some raw product used in its making; (3) seasonal fluctuations in all products of the soil . . . . ; (4) the different proportions of fixed capital employed, the different

finally, the same questions would immediately have presented themselves with regard to capital.

But they presented themselves as it was. Ricardo was perfectly well aware that, in getting rid of rent, he had merely postponed his difficulty, and that in point of fact, this difficulty was insurmountable. But he had done his best; and then, with his customary candor, a candor which would have done credit to a trained scientist, admitted that this best was not well.

Not so with his disciples, MacCulloch and James Mill. Ricardo's argument appealed to them as wholly satisfactory; they were unable to appreciate the difficulty which Ricardo himself felt with it. For is it not clear that midway between man and environment, labor and land, there are those modifications in environment—new items of environment—due to the activity which men have exerted in their traffic with the original endowment? Genetically speaking, capital is mere stored-up labor, and that part of the entire productive output of society that is due to capital is, in last analysis, it was said, rightly to be ascribed to labor; interest is therefore indirect wages.

Taking the hunter illustration, Ricardo had formulated the argument as follows:

> Value is regulated not solely by the time and labor [directly] necessary, ... but also by the time and labor necessary for providing the hunter's capital, the weapons; [so if] the weapon necessary to kill the beaver was constructed with . . . . more labor than, etc., the beaver would be of more value than two deer. . . . . The same principle would hold true, that the exchangeable value of the commodities produced would be in proportion to the labor bestowed on their production; not on their immediate pro-

quickness of the returns of the circulating capital; (5) the quantity of foreign commodities used in manufactures; (6) the acknowledged effects of taxation; (7) and the almost universal prevalence of rent in the actual state of all improved countries; . . . . it is *certainly not* the quantity of labor which has been employed in the production of each particular commodity which determines their relative values in exchange, at the same time and at the same place (Malthus, *op. cit.*, pp. 104, 105). Ricardo acknowledged all this, but the claim that rent," etc.—Whittaker, *op. cit.*, p. 85.

duction only, but on all those implements or machines required to give effect to the particular labor to which they were applied;[11]

and he enumerates as among these other applications of labor,

> a portion of the labor bestowed on building the ship in which it [the cotton—taking the stocking industry as an example] is conveyed, ... a portion of the labor of the engineer, smith, and carpenter who erected the buildings and machinery, ... and of many others whom it is unnecessary further to particularize. The aggregate sum of these various kinds of labor determines the quantity of other things for which these stockings will exchange, while the same consideration of the various quantities of labor, which have been bestowed on these other things, will equally govern the portion of them which will be given for stockings.[12]

And to show that these same conclusions apply to the commodities exchanged against the stockings, he inquires what effect would be felt upon prices, if any of the labor processes were shortened.

But in paragraph 17 of the same section he finds it necessary to take account of the influence of time; he recognizes that where the capitals applied are not of equal durability or of similar sorts, changes will be worked in exchange ratios—as, for example, by differences in proportions of fixed as against circulating capital, subsistence goods, etc., where time becomes an important element in fixing profits on stock. And he points out that if different commodities require different proportions of labor and capital in their production, changes in the value of labor must affect one commodity more than another.

But note that while this might appear to regard labor not only as an equalizer and leveler of exchange values, but also as somehow independent and as possessing in its own right a value in such wise as to make it definitely and ultimately a cost, this would not be a fair interpretation of Ricardo's position. He is reasoning merely that as sheer matter of time and of the corresponding interest charges, or

[11] *Op. cit.*, chap. i, sec. 3, pars. 14, 15.
[12] *Ibid.*, par. 15.

as a question of some departure—due perhaps to changing conditions with lapsing time—of the fixed capital from the value level of its labor cost, which departure he does not attempt to explain, or through changes in wage requirements, due, we will say, to subsistence influences,—commodities may differ in exchange value, because of the larger or smaller share of fixed-capital outlays as compared with wage outlays, or of fixed-capital outlays as compared with circulating-capital outlays. And labor, as he often says, may vary both in exchange and in ratio value. But this variability, as Ricardo thought of it, is especially of the ratio sort; but in any event this variation in the relative share in the productive output must be allowed for by employers in combining labor and capital as productive agents, precisely because a difference in cost must obtain with different combinations of these agents. And thus it appears that labor and capital, while they may have been shown to be homogeneous in origin, are not necessarily under this argument reducible to labor homogeneity for purposes of cost computations.

It is worthy of remark that Ricardo does not at this point very closely distinguish how much of his difficulty is due to *time,* as it expresses itself in interest charges, as against time as offering opportunity for changes in the exchange value of labor or in the exchange value of the capital goods—machines, buildings, etc.—or in the ratio value of labor and capital—wages and profits.

James Mill, however, approached the problem without misgiving and left it in entire contentment: This reduction of capital and labor to homogeneity may, he says, be attempted either (1) by the method of reducing labor to terms of capital, or (2) by reducing capital to terms of labor. The first method is declared impracticable; true, the capitalist pays the wages of labor and reckons the wage payment as a capital outlay; but this is only to say that laborers and capitalists in co-operation have produced the com-

modity in question [as technologically they have, but as cost-wise they have not], and that the product should belong to them both, except for the fact that one partner has bought out the other before the returns are in; this, however, it is said, does not transform the case into a production by capital alone.

The second method of arriving at homogeneity is accepted upon the line of argument falteringly and dubiously worked out by Ricardo. But how about the difficulty as to time interest? Interest, Mill replies, is merely the slow payment for the wearing-out of capital; all the partial payments will equal the whole value of the stored-up labor. But even so, Mill asks, what shall be said of the increase which comes with time to the value, say, of wine? Where is the labor in this? There is no more capital by which to explain the increase. "It is no solution to say that profit must be paid, because this only brings us to the question, why must profit be paid?" This must be because the capital applied elsewhere, e. g., upon the land, would during the same time have earned a profit, and so must have a profit here. The wine which works is like a machine which works without superintendence, and payment for the work of the machine is really payment for the work which made it.[13]

And so, having said nothing of why the capital would, in agriculture, have had any better right to command interest, he dallies sentence-long with the principle of opportunity cost, and finally, having reduced the working of wine, and logically as well the energy of all the winds and tides, and, indeed, of every labor of the whole universe groaning and travailing in pain together, to terms of human labor, goes on his way unafraid and rejoicing. And so with MacCulloch, though not quite so humorously so.

But with Ricardo the petrified-labor interpretation of capital was not completely satisfactory. In his corre-

[13] James Mill, *Elements of Political Economy*, chap. iii, sec. 2.

spondence with MacCulloch,[14] he regretfully admits, but none the less stoutly argues, that exceptions must be recognized to the general doctrine of proportionality between exchange value and labor cost; but

> all the exceptions to the general rule come under the one of time—I sometimes think that if I were to write the chapter on value again which is in my book, I should acknowledge that the relative value of commodities was regulated by two causes instead of one, namely by the relative quantity of labor necessary to produce the commodities in question, and by the rate of profit for the time that the capital remained dormant. . . . . I am not satisfied, as I have often told you, with the account I have given of value, because I do not know exactly where to fix my standard.[15]
>
> [He is] sure that the general idea is right, [but] I cannot get over the difficulty of the wine which is kept in the cellar for three or four years, or that of the ash tree which perhaps originally had not 2*s.* expended upon it in the way of labor, and yet comes to be worth £100. . . . . There is no difficulty in measuring all this in a standard such as ours, but the difficulty is in showing why we fix on that measure, and in proving it to be, what a measure of value must be, itself invariable.[16]

And on August 2, 1823, Ricardo wrote to Malthus:

> As far as I have yet been able to reflect upon MacCulloch's and Mill's suggestion, I am not satisfied with it. They make the best defense for my measure, but do not really get rid of all the objections. I believe, however, that though not without fault, it is the best (*ibid.*, p. 160).

That is to say, Ricardo believed that the variations due to capital influences are, in short-time adjustments, relatively unimportant, labor thereby remaining "for many commodities a fairly good standard, and with many more an excellent standard."

And now, very briefly, attention must be called, not to the confusion of cost concepts involved in including interest in cost while excluding rent, for this has already occupied us overlong, and will later call for still more of time

[14] *Publications of the American Economic Association* (J. H. Hollander), Vol. X, Nos. 5, 6, pp. 70, 71, 177, 178.

[15] *Ibid.*, p. 96.

[16] *Ibid.*, p. 153.

and attention, but to the confusion of capital concepts necessarily associated with this cost discussion. How much of truth is there, for example, in James Mill's notion that labor cost cannot be translated into capital terms, since, despite the fact that the employer must reckon his wage payments as capital outlays, it remains true that both capital and labor have co-operated to produce the value in question, capital having simply bought out the laborer before the goods are marketed? And if it is true that the production was not by capital alone, but by capital and labor in co-operation, is this equivalent to asserting that *in point of cost* the production process was shared? And if so, in what sense are these co-operating costs commensurable and homogeneous? The employer has incurred outlay and abstinence costs, and possibly, also, as Mill blunders into recognizing, opportunity costs. As for the wage-earner, he has undergone his labor burden, and having received his wages therefor, would appear to have disappeared, for the purposes in hand, from the cost reckoning. His wages, while costs to his employer, are not cost, but compensation to himself. To the employer they are not pain quantities, but outlays, and as such enter *for him* into the cost reckoning solely under the capital denominator. And his are the only costs which have to do with the sale aspect of the goods. The truth is that, under competitive production, costs are mostly outlay costs, and, whether outlay or other, are mostly or entirely reduced to the capital denominator.[17]

This is the sense in which Ricardo and Mill were, for the time being, using the term *capital,* viz., in the commercial, competitive, acquisitive sense, inclusive of moneys, credits, supplies, in short all forms of labor-employing or gain-acquiring funds. But this is not at all the sense in which the capital notion must sound, if anything is to be done with the proposition that capital is stored-up labor in such wise that interest may thereby be conceived as reducible to wages. For in the competitive-acquisitive sense, capital, so far at least as it is of the circulating sort, is something that is constantly changing its form; it is merely basis for expenditure, and may be invested in labor or in materials, or as the hire of capital goods, or as interest on

[17] But outlay costs themselves express in turn one aspect of opportunity cost, or may do so, viz., the value of the agents in hand for their best alternative application; but all this must wait its time.

credit loans, or as rent of land, or for that matter in pretty much anything else; that is to say, it is a form of capital not at all corresponding to capital taken in the technological sense, as one of the three primary categories of socially productive factors, but is a form now labor, now land, now materials, now machinery, now subsistence goods, everything by turns and nothing long, with only one unifying and constant characteristic, that it is all the while a basis of charge in the individual computation of costs, thereby a competitive category of the purest quality. And, indeed, it may as well be noted in passing, that this tripartite division of productive agents is (1) purely social, (2) purely technological. Competitive society has entirely different categories. But the various concepts of capital must await their turn for discussion; see chapter xi.

CHAPTER IV

SENIOR

Any other cause limiting supply is just as efficient a cause of value in an article as the necessity of labor in its production. And, in fact, if all the commodities used by man were supplied by nature without any intervention whatever of human labor, but were supplied in precisely the same quantities that they now are, there is no reason to suppose either that they would cease to be valuable, or would exchange in any other than the present proportions.[1]

No writer of the cost school is fairly to be charged with overlooking the fact that utility is a fundamental condition to the existence of value; utility and the market demand resting upon it are merely assumed—taken for granted—as reasonably going without saying. But water and wine, iron and gold, etc., are taken as cases demonstrating that the fixation of value—all the while inside the limits set by utility—must be found on the cost side of the value investigation. True, there are goods of a distinctly scarcity sort, but these Ricardo and his associates left out of the reckoning, as exceptional in quality and relatively unimportant in volume; the investigation confined itself mostly or entirely to cases of freely reproducible goods.

But Senior has something to add here; he puts the causes of value as utility and scarcity. Ricardo, less accurately, had said: "Possessing utility, commodities acquire value from two causes, labor and scarcity." [2]

But evidently the truth was with Senior; the necessity for the labor is in the scarcity; labor and scarcity point to one and the same fact. If goods were supplied gratuitously but in precisely the same quantities as now, the exchange relations would be in no wise affected; the labor requirement is purely an influence affecting the supply side of the value equation.

[1] Senior, *Political Economy,* 6th ed. (London), p. 24.

[2] *Op. cit.,* chap. i, sec. 1, par. 3.

Ricardo had regarded labor cost, in the pain aspect, as the essence and ultimate significance of *real value,* but had regarded *exchange value* not as a question of labor content but only of proportion to labor content. And he had found infinite difficulty in getting interest costs into this formulation—to say nothing of rent. Senior purports to find a solution for this perplexity. Homogeneity between capital cost and labor cost can, to his thinking, be worked out through his discovery of abstinence pain as the condition to which the existence of capital is subjected. Thereby labor and saving are conceived to be reducible to a common denominator of pain.

Just how much this doctrine would have profited Ricardo is not altogether clear. It is to be remembered that Ricardo employed pain cost only as, in terms of ultimate content, the explanation of real value; and so far as real value was concerned, he was not conscious of needing more for the further strengthening of his doctrine. Exchange values were not, in his view, a question of pain cost in any other sense than that, through wage-cost outlays, exchange values become proportional to labor pains. But could he not have made exchange value a proportion resting upon the combined pain of labor and of abstinence?

Recalling, however, that Ricardo worked out his doctrine only through the medium of outlay cost, as a question of employers' wage expenditures, and was able to formulate his proportion only upon the assumption of such homogeneity in labor as would require employers to pay wages for it in precise proportion to its quality of burden, it becomes evident that capital-saving, pain of abstinence, can be fitted into the proportion only upon the twofold assumption, (1) that saving is homogeneous in pain quality so that interest payments can be safely regarded as proportionate to savings pains, and (2) that savings pain and labor pain are in such wise homogeneous that labor pain and savings pain command equal remuneration per unit of pain. But whether or not, in close analysis, all this would have turned out to be thoroughly practicable, it is certain that Senior himself did not attempt the necessary analysis; nor is it clear that he adopted Ricardo's distinction between real value and exchange value.

Senior makes labor and natural agents the primary factors of production; abstinence, while not primary, is none the less important:

> The power of labor and of the other instruments which produce may be indefinitely increased by using their products as the means of further production. . . . . By the word abstinence we seek to express that agent, distinct from labor and the agency of nature, the concurrence of which is necessary to the existence of capital, and which stands in the same relation to profit [interest] as labor does to wages.[3]

And plainly enough, from the point of view of laborer and saver—in purpose and possibly in moral deserving—interest is the reward of abstinence as wages are the reward of labor. But equally plainly, from the point of view of borrowers and employers, this identity of relation does not hold; wages are paid for the services of labor as a productive agent; interest is not paid for the services of abstinence as productive agent, but for the services of capital.

To the objection to calling abstinence an active agent of any sort, Senior replies: "To abstain from the enjoyment which is within our power, or to seek distant rather than immediate results, are [*sic*] among the most painful exertions of the human will." [4]

However, even if it be true that abstinence is painful, this is world-wide from showing that it is productive, and still farther from showing that remuneration according to productiveness and remuneration according to painfulness must lead to one and the same result. But in point of fact it is not clear that abstinence is an independent fact of pain. When one has produced wealth the question before him is when and how to spend it; the wealth is a good thing to have; whatever grief there may have been in its getting is all past, and the time for the other side of the account has arrived. How to take one's enjoyment, the manner as well as the time of it, may be a puzzlesome matter and may give occasion to a deal of doddering. And it is true that the abstinence may involve the denial of satisfaction to a present and pressing want; it is equally true, however, that the choice may lie between positive

[3] Senior, *op. cit.*, p. 59.

[4] Senior, *op. cit.*, p. 59. Precisely in the same sense and for the same argumentative end, Courcelle-Seneuil uses the term *travail de l'épargne.*

gratifications; it would be a waste of sympathy to grieve with one who has to choose between two pleasures, and to call either pleasure a pain because it is conditioned on going without the other pleasure. The term sacrifice might be serviceable here for expressing the truth of the case, though the cost argument, as one of pain, would not thereby be greatly strengthened. But all of this has, of course, nothing to say as to the proposition that, without some compensation, the considerations making for present as against deferred enjoyment might be the stronger, and the saving fail to take place: nor is anything to be inferred as to this or any other justification, morally speaking, for the receipt of interest. But, in itself, abstinence is not pain, and may not remotely imply pain; it is often only one of the different data in a choice between pleasures. Whether or not, were it always a pain, it could be reduced to a common denominator with labor pain is, therefore, not a pressing problem.

Bearing in mind the sense in which Senior stands for the proportionality of value to cost, there need be no surprise in meeting his assertion that neither profits nor wages are costs, but only abstinence and labor.[5]

In a sense and as bearing on the concept of *real value,* Ricardo would have assented to this; and as bearing on market value also, Ricardo would have been keen to insist that wages and interest are not ultimate determinants of value but only that values are proportioned to them; but it would have sounded strange to Ricardo to hear it denied with reference to market value that wages and interest are costs. This doctrine of Senior is, in fact, a definite abandonment of the notion of outlay cost;[6] his doctrine of proportionality does not perhaps thereby of necessity fail, but it certainly awaits the making of its case. If labor and abstinence cannot be made homogeneous and commensurable as items of pain cost—and particularly, if abstinence (or, for that matter, labor) is not necessarily a pain cost at

[5] Senior, *op. cit.,* p. 100.

[6] "Want of the term sacrifice, or of some equivalent expression, has led Mr. Malthus into inaccuracy of language. . . . . When he termed profit a part of cost of production, he appears to have meant, not profit, but that conduct which is repaid by profit; an inaccuracy precisely similar to that committed by those who term wages a part of the cost of production; meaning not wages, which are the result, but the labor for which wages are the remuneration."—Senior, *op. cit.,* p. 100.

all, and if the common denominator of market value under the entrepreneur outlay-cost analysis is abandoned, it only remains to wonder what the solution will be.

But after all, Senior has a proportion doctrine; he says:

> When the only valuable agents employed are those which are universally accessible and are therefore practically unlimited in supply [that is, when there is neither capital nor land, or where there are unlimited capital and land, and so no differentials of advantage], the utility of the produce, or, in other words its power [in exchange?], must be in proportion to the sacrifice made to produce it, ... since no man would willingly employ a given amount of labor or abstinence in producing one commodity, if he could obtain more advantage by directing them [it] to the production of another.[7]

This is one of Senior's italicized theorems; it is to be objected that there is no reason why the utility of products should be proportional to the sacrifices of production, unless upon the assumption not only of the homogeneity of labor pain, but also of the reduction of utility to a marginal basis. Otherwise it must merely be true that, if a producer could, with a given sacrifice, produce something of greater utility than the thing in hand, he would change his direction of production.

But in essentials Senior's doctrine is really a doctrine of opportunity cost—requiring, however, some modification. Opportunity cost may as well lie in some alternative between pleasures or benefits, as between pains or burdens; at the day's-end margin, labor may be still a pleasant thing, and yet be abandoned, if only the attractiveness of recreation be such as to outweigh the pleasures of the labor process taken in conjunction with the advantages of the resulting product. Among those different possibilities of activity in which products outweigh burden, that one will be selected in which the ratio of product to effort is most favorable, or, more accurately, in which the surplus of satisfaction is greatest.[8] The opportunity cost involved in the case would be found in the advantages of that course

[7] Senior, *op. cit.*, p. 97.

[8] Patten and Clark have, perhaps, best elaborated this truth. And it may be remarked that this also is not quite accurate; we are not necessarily committed to any homogeneity-and-quantity calculus of pleasure. All of the requirements of the case would be met—and better met—by substituting the clause: *in which the surplus of satisfaction is the most desirable.*

of activity between which and the selected course the problem of choice was actually presented—that is, in the most attractive course among the competing and vanquished alternatives.

But Senior makes it clear that commodities may be of sorts that cannot be reproduced, or that can be had only at remote and uncertain intervals; here the values "are subject to no certain rule, and depend altogether on the wealth and taste of the community." [9] That is to say, the supply term being inelastic, the value is left to be determined by the utility, or by the demand, or, at all events, by something taken for granted and unanalyzed on the demand side. But, for most commodities—the kind that we are considering—"the obstacle to the supply . . . . consists . . . in the difficulty of finding persons ready to submit to the labor and abstinence necessary to their production. In other words, the supply is limited by the cost of production." [10]

Here it is evident that Senior abandons the opportunity computation and goes back to pain cost. For with him *abstinence* is not intended to carry its possible implication of the foregoing of products alternatively producible. He is talking about the grief and groan of saving and the burden and backache of labor; and in this absorption he neglects to ask himself the very simple question why in actual society so many men are indisposed to enter the business of hat production. Is it really true that the discomforts of the occupation are an adequate explanation of the facts?

Senior admits that, to be accurate for short periods, his cost doctrine must presuppose perfect mobility in capital and labor; but it is to be noted that even this inadequacy would disappear if his doctrine of cost really rested on the sacrifice of alternative opportunities. But admitting these temporary variations, he reflects:

> Political Economy does not deal with particular cases, but with general tendencies; and when we assign to cost of production

[9] *Op. cit.*, p. 97.
[10] *Ibid.*, p. 97.

the power of regulating prices in cases of equal competition, we mean to describe it not as a point to which price is attached, but as a center of oscillation which it is always endeavoring to approach.[11]

And then he goes on to show that production in which no appropriated natural agent has been concerned is the only case of perfectly equal competition; all others are cases of monopoly more or less marked.

Just why, from the point of view of outlay cost—the only tenable point of view for the proportion doctrine—it should be alleged that free competition fails, so long as, on terms of paying the market charge, all competitors have equal opportunity of enjoying the advantages attending the control of appropriated natural agents, is not clear, though it is clear enough from the point of view of pain cost. But Senior makes full and frank admission that, in actually existing conditions, his doctrine of pain cost leads nowhere, so far as explaining market values is concerned; he has arrived at the very *impasse* that Ricardo faced:

It is difficult to point out an article, however simple, that can be exposed to sale without the concurrence, direct or indirect, of many hundred, or, more frequently, of many thousand, different producers, almost every one of whom will be found to have been aided by some monopolized agent. There are few things of which the price seems to consist more exclusively of wages and profits than a watch [MacCulloch's favorite example]; but if we trace it from the mine to the pocket of the purchaser, we shall be struck by the payment of rent . . . . at every stage of its progress. Rent was paid for the privilege of extracting from the mines the metals of which it is composed; for the land which afforded the materials of the ships in which those metals were transported to an English port; for the wharves at which they were landed, and the warehouses where they were exposed for sale; the watchmaker pays a rent for the land covered by his manufactories, and the retailer for that on which his shop is situated. The miner, the shipwright, the housebuilder, and the watchmaker, all use implements formed of materials produced by the same processes as the materials of the watch, and subject also in their different stages to similar payments of rent. . . . . When we speak, therefore, of a class of commodities as produced under circumstances of equal competition, or as the result of labor and abstinence, unassisted by any other appropriated agent, and consider their prices as equal

[11] *Op. cit.*, p. 102.

to the sum of wages and profits that must be paid for their production, we do not mean to state that any such commodities exist but that, if they did exist, such would be the laws by which their prices would be regulated.[12]

All of which may fairly be described as a dissertation, by a great labor-value authority, upon how labor does not regulate value. But note that by some method of swift transformation the point of view has now become that of competitive-outlay cost, and that rent as well as interest outlays are now included in the charges that go to make up market price.

Nevertheless, Senior in his discussion of rent implies his acceptance of the Ricardian doctrine that rent is not a part of value-regulating cost. Still it must be said that he does not so declare in terms; he does, however, point out that Ricardo, in his controversy with Say, committed the fault of inaccuracy; Ricardo should have made his stand for price-determining cost at the intensive margin. And with this amendment Senior appears to acquiesce in the Ricardian doctrine, so far as it asserts that price tends to coincide with the cost of that part of the product produced at the greatest expense: nor does he seem to recognize that, from the point of view, not of social, but of outlay cost, there is no reason why costs on better land should be either greater or smaller than costs on poorer or on marginal land.

But there is possibility or misinterpreting Senior at this point—for it is hard to see how he can regard interest as a value-determining cost and still exclude rent. For he makes it clear that the distinction between rent and interest ceases to have significance, as soon as the capital has become the property of someone to whose exertions and abstinences it did not owe its origin. And he rightly remarks that there is, of course, abstinence in not selling property, of no matter what sort or origin, and in not spending the proceeds in current enjoyment. Evidently, however, if this were fully worked out, all rent would become interest. And Senior finds also great difficulty in

[12] *Op. cit.*, pp. 112–14, *passim.*

drawing the line between wages and rent, and inclines to regard as rent all cases of extraordinary compensation for unusual ability.[13]

[13] "We may be asked, then, whether the improvements which form the greater part of the value of the soil of every well-cultivated district are all, and forever, to be termed capital; whether the payments received from his tenants by the present owner of a Lincolnshire estate, reclaimed by the Romans from the sea, are to be termed not rent, but profit on the capital which was expended fifteen hundred years ago. The answer is, that for all useful purposes the distinction of profit from rent ceases as soon as the capital, from which a given revenue arises, has become, whether by gift or by inheritance, the property of a person to whose abstinence and exertions it did not owe its creation. The revenue arising from a dock, or a wharf, or a canal, is profit in the hands of the *original constructor*. It is the reward of *his* abstinence in having employed capital for the purposes of production instead of those of enjoyment. But in the hands of his heir it has all the attributes of rent. It is to him the gift of fortune, not the result of a sacrifice. It may be said, indeed, that such a revenue is the reward for the owner's abstinence in not selling the dock or the canal and spending its price in enjoyment. But the same remark applies to every species of transferable property. Every estate may be sold, and the purchase money wasted. If the last basis of classification were adopted, the greater part of what every Political Economist has termed rent must be called profit."—*Op. cit.*, p. 129.

Professor Whittaker does not appear to experience the difficulty that I have met in interpreting Senior's position as to the relations of rent to cost. To me it seems impossible, upon any classical level of discussion, to include rent payments within pain cost; it is equally difficult to exclude rent payments from outlay costs, unless the distinction is set up between value-determining and value-determined costs. Whittaker writes (Whittaker, *op. cit.*, pp. 102–4):

"According to Senior, land rent enters into price. So far both 'profits' of stock and rent of land exist to destroy the proportionality of values to labor cost. This is the result to which Malthus' criticism of Ricardo led. But Senior's criticism goes beyond Malthus'. Wages, as an element in entrepreneur's cost, are not even in proportion to the labor remunerated. That is to say, that is what Senior says, if we keep his thought while reforming his language. He states that the actual income, which we always call *wages*, is really composed in many cases of wages, profits, and rent. He says this because he wishes to define wages as that remuneration which is in proportion to sacrifice. . . . . Senior's *rent to skill* is really *an excess of wages* over the amount required to be in proportion to disutility" (pp. 102, 103).

"Piecing together for ourselves what Senior says, it is his position that the value of commodities must include (if the commodities are to be produced) rent, profits, and wages; rent and profits, being different percentages in the whole entrepreneur's cost of different goods, make values out of proportion to labor cost; there is no necessity of considering profits as an element in entrepreneur's cost approximately in proportion to wages; and lastly, wages are not in proportion to labor, which is disutility" (p. 104).

CHAPTER V

JOHN STUART MILL

With John Stuart Mill the transition is approximately complete to the point of view of entrepreneur cost.

We need delay long neither upon his doctrine of the determination of wages—the wage-fund theory for short periods, and the population-subsistence doctrine for long-time tendencies—nor upon his determination of interest payments according to the cost-abstinence analysis as related to the supply of capital; no matter how these outlays get determined, it is sufficient, for present purposes, to note that, accepting them as the market gives them, Mill treats them as items of outlay cost, and finds market values to be fixed according to the law of costs as formulated in the entrepreneur sense—but all the while with two modifications, one of addition and one of subtraction: for, following Ricardo's doctrine, rent is made no part of price, and wages of superintendence, as an element in minimum profit, are included in price. Minimum profit is defined as "that which is barely adequate, at the given place and time, to afford an equivalent for the abstinence, risk, and exertion implied in the employment of capital."[1] After covering all outlays, and after remunerating the capitalist owner for forbearing to consume, there must be something left to recompense the labor and skill of the person who devotes his time to the business; but how much? The amount is variable depending on the amount necessary to compensate the abstinence, and still more variable to compensate the risk. "That portion, too, of the gross profit which forms the remuneration for the labor and skill of the dealer or

[1] John Stuart Mill, *Principles of Political Economy,* Book II, chap. xv, sec. 2.

producer is very different in different employments." [2] Mill does not say why, but cites apothecaries as an example of a trade where "a considerable amount of labor and skill is required to conduct a business necessarily of limited extent. . . . . A higher than common rate of profit is necessary to yield only the common rate of remuneration. . . . . After due allowance is made for the various causes of inequality" giving greater or less wages of superintendence or of risk, "the rate of profit [interest] on capital in all employments tends to an equality." [3]

There is certainly no hint of opportunity cost here; so far as any determinant of minimum profit is indicated, it is one of pain or burden. But at any rate, as it is elsewhere said, "the cause of profit is that labor produces more than is required for its support." [4]

Still it is not clear whether this phrase, "required for its support," points to a minimum-of-subsistence principle, or to a standard-of-living principle, or whether the proposition is a mere mathematical truism. "The reason why capital yields a profit is because food, clothing, materials, and tools last longer than the time which men take to produce them:" so that there is a surplus to the capitalist. This might appear to look toward some subsistence doctrine, if only Mill had not elsewhere repudiated that doctrine,—at all events for short-time adjustments,—setting up, instead, the capital limitation and wage-fund determination: but the better interpretation seems to be merely that, products having exceeded outlay, there is a remainder left over for the employer. "If the laborers of the country collectively produce twenty per cent. more than their wages, profits will be twenty per cent., whatever prices may or may not be." [5] This is Ricardo's ratio idea.

Outlays for materials and implements are resolved into wage payments: "he thus repays to a previous producer the wages which that previous producer has paid." [6] True, there is a profit with it, but had the present employer produced these supplies for himself, there would

[2] Mill, *op. cit.*, sec. 3.

[3] *Ibid.*, secs. 3, 4.

[4] *Ibid.*, sec. 5.

[5] *Ibid.*, sec. 5.

[6] *Ibid.*, sec. 6.

also have been, to be reckoned in the cost, a profit for himself (but how much is again not said); and so in the summing up, "all the advances have consisted of nothing but wages," excepting what have already gone for profit. Note that *profit* in Mill's use here includes not only interest, but something more than interest, something for superintendence and risk.

> The gains of the capitalist employer depend, then, on the magnitude of the produce; . . . . secondly, the proportion of that produce obtained by the laborers themselves; the ratio—the *rate* of profit, the percentage on the capital—depends on the second of the two elements, the laborers' proportional share, and not on the amount to be shared. . . . . We thus arrive at the conclusion of Ricardo and others, that the rate of profit depends on wages. . . . . However, ... instead of saying that profits depend on wages, let us say—what Ricardo really meant—that they depend on the cost of labor.[7]

It is well to note in passing that this was not what Ricardo meant: Mill is hesitatingly and gradually deserting the doctrine of relative shares in the product—the ratio-value concept—and is going over to the notion of profit, not as fraction but as absolute residuum,—surplus above outlay: "What labor brings in to the laborer and what it costs to the capitalist, are ideas quite distinct, and which it is of the utmost importance to keep so." [8] True, there are all levels of wages, but if at the same time the efficiency is of a sort to correspond, the cost of labor to the capitalist may be no greater.

And note again that there is still nothing here about causes; the reasoning is entirely mathematical; the problem is not treated as distributional in the sense of looking for the ultimate forces of determination, and one is left to wonder how, efficiency remaining the same, etc., the wages should so rise or fall, or why the supplies which the laborer buys with his wages become more or less costly. If one resorts to the wage-fund doctrine for help, he is confronted by the suspicion that this doctrine also is merely mathematical, and as such, is a truism. Thus far, then, the entire discussion has amounted to a descriptive treatment of wages, interest, and profits, as elements entering into cost of production; and so far as the exposition has yet

[7] *Ibid.*, sec. 7. [8] *Ibid.*, sec. 7.

proceeded, these remunerations stand as ultimate opaque unyielding facts, unexplained and irreducible data, furnishing the basis for entrepreneur cost.

Turning now to Mill's formal discussion of value in the chapter under that caption, and especially to his discussion of "Cost of Production in Its Relation to Value,"[9] we find it said that value, no matter under what law of return, is always the result of demand and supply. The minimum price must be sufficient to pay the cost and the ordinary expectation of profit, else capitalists will not go on producing the commodity.

Note that profit is here treated as something over and above cost, cost being regarded as substantially the equivalent of expenditure. "They will not even go on producing at a profit less than they can live upon"—seemingly a doctrine of subsistence minimum for employers; but what will they do instead? Doubtless, as it is said, they may submit to temporary loss in hope of better times, but, broadly, "the cost of production together with the ordinary profit may be called the necessary price."

And here, again, we remark there is as yet nothing to indicate how much must be this necessary profit, or what are the ultimate forces in its determination. But Mill shows that by the influence of prices upon the outflow and inflow of capital, profits are always tending toward equality; and precisely this trend toward equality is presented as the guarantee that things will exchange against one another in the ratio of their costs. Perhaps, after all, this may, for present purposes, be accepted as a sufficient explanation for the determination of profits, so far as profits are held to mean interest only; but as so understood, the doctrine, fully worked out, will resolve itself into a case of opportunity cost.

Mill's "Ultimate Analysis"[10] is most difficult of adequate summary or even of fair paraphrase.

Tracing capital to its ultimate origins, Mill finds that labor is "so much the principal cost of production as to be

[9] Mill, *op. cit.*, Book III, chaps. i–iv.

[10] Mill, *op. cit.*, Book III, chap. iv.

nearly the sole cost." And so it is approximately accurate to resolve interest into wages; so cost, as regarded from the employer's point of view, is a question of wage outlays,—wages, and not labor, being from this standpoint the basis of cost. But wages are cost only as modified by considerations of efficiency, that is, only with reference to the quality and quantity of product. In substance, the doctrine is that a given sum of products costs the wages directly or indirectly paid out to produce it. But, after all, values of commodities are exchange relations of commodities with one another; values are, then, purely relative; and therefore costs of production as bearing on value are not absolute but relative quantities. So value relations are independent of influences of cost, whether of rise or of fall, if only the commodities under comparison are proportionally affected. "Otherwise, there could be no such thing as a real rise of wages; for if wages could not rise without a proportionate rise in the prices of everything, wages could not rise at all." But if wages are higher in one industry than in another, values will be affected through costs.

Note that these differences in wages are not explained as due to differences in the values of the products; it is just the other way about. "Things . . . . which are made by skilled labor exchange for the products of a much greater quantity of unskilled labor, for no reason but because the latter is more highly paid." Thus there is no proportion of value to labor, but only to entrepreneur costs; and these costs are presented as causal and ultimate. "So wages do enter into value; the relative wages of the labor necessary for producing different commodities affect the value as much as the relative quantities of labor. . . . . The absolute wages paid have no effect upon value, but neither has the absolute quantity of labor." But, in substance and effect, values are nevertheless proportional to quantity of labor: "In considering, however, the causes of variations in value, quantity of labor is the thing of chief importance," for that varies now with one commodity and now

with another, but variations in wages are usually general, and thus, by the very fact of being general, have no significance for value.

Note, however, that this proposition really goes no farther than to say that variations in value come, not through a rise in general wages, but through changing methods of applying labor to production. But changes in machinery and appliances are at least as frequent and as radical as changes purely of the labor sort; it therefore follows that variations in values due to causes working on the side of profits (interest) are at least equally important with those working on the side of wages.

But all of this must allow for modification through the bearing of profits (interest+risk-charge+wages of superintendence) on value, in so far as some industries are more capitalistic than others in their methods of production. But here also it is evident that not absolute profits but only relative profits have significance for exchange relations. And, as Mill rightly insists, profits are found to differ in this relative way, butchers, for example, gaining higher profits than bakers. And time, with its correlative of interest, also becomes of great importance, as in the aging of wine.

> [If to] attain the desired quality, the wine requires to be kept five years, the producer or dealer will not keep it, unless at the end of five years he can sell it for as much more . . . . as amounts to five years' profit, accumulated at compound interest. Here, then, is a case in which the natural values . . . . do not conform to cost of production alone, but to cost of production plus something else. Unless, indeed, for the sake of generality in the expression, we include the profit which the wine merchant foregoes during the five years, in the cost of production of the wine: looking upon it as a kind of additional outlay, over and above his other advances, for which outlay he must be indemnified at last.

Evidently Mill is not entirely clear as to the basis on which this time charge is to be counted a cost, if, indeed, it is to be so counted at all; in a sort, values seem to conform "to their costs of production plus something else. This, however, disturbs the general consistency of the theoreti-

cal formulation;" there may, then, after all, be nothing for it but to recognize opportunity cost in this exceptional case.

Mill does not, however, in terms commit himself absolutely to this view; but "all commodities made by waiting are assimilated, at least approximately, to the wine in the preceding example." And he closes with regarding these time-charge items as, in the relative bearing, very important influences upon values, although nothing further than this suggestion of opportunity cost is accomplished in the direction of telling why. At any rate, it is clear that "in comparison with things made wholly by immediate labor, profits enter more largely into the cost of production" of all commodities made by machinery; whereupon there follows an excellent example of all this, under cover of which the explanation meanwhile gets forgotten; which, by the way, is precisely as far as Ricardo got, the only difference being that Ricardo was perfectly aware that something was the matter, while Mill is not. In general, Mill appears to hold by pain or abstinence cost as the ultimate explanation of interest. But if neither of these things is adequate, perhaps, he thinks, opportunity cost may have some efficacy for the case.[11]

But whatever may be the explanation, it stands for true that, because of the differing degrees in which production is capitalistic, "every rise or fall in general profits will have an effect on values; not, indeed, by raising or lowering them generally, but by altering the proportions in which the values of things are affected by the unequal lengths of time for which profits are due."

But to return to the cause underlying the values of these cost items of outlay: In the main the explanation is found by Mill in the fact that these items themselves depend for their value on their respective costs of production. When, however, these are not cost but scarcity values, they are equally and similarly carried over as costs into the value of the product. The typical case of this sort of cost is found with limited natural agents, as water-powers and the like. But these cases, not being marginal, have, as Mill appears to think, no bearing upon value. And this brings us to the

[11] "[With Mill] the profit of capital is stated explicitly to be the remuneration of abstinence, but nothing is made to depend on this. Abstinence is not elevated into a position logically co-ordinate with labor, nor are the two conceived of together as constituting subjective costs, as distinguished from entrepreneur's costs, consisting in profits and wages."—Whittaker, *op. cit.*, p. 106.

question—does rent enter into cost? "No one can deny that rent sometimes does enter into cost of production; if I buy or rent a piece of land and build a cloth manufactory on it, the ground rent forms legitimately a part of my expenses of production which must be paid by the product."

But this does not necessarily imply that the value will thereby be the greater, that is, that these costs are value-determining. And in chapter v, on "Rent in Its Relation to Value," Mill writes: "Rent forms no part of the cost of production which determines the value of agricultural products"—an assertion which must stand either as setting up an entirely indefensible distinction between agricultural and other products, or as imposing the conclusion that not all outlays involved in production may be ranked as value-determining costs, but only those involved in marginal production—which opens up questions too wide-reaching for present discussion, viz., whether the marginal product has any peculiar value-determining quality, and whether, if it has, we shall find this marginal item of product to be a marginal-man item or a marginal-land item.

Mill, however, elsewhere says: "But when land capable of yielding rent in agriculture is applied to some other purpose, the rent which it would have yielded is an element in the cost of production of the commodity which it is employed to produce," [12]—a most important and much-discussed admission—still, however, leaving it possible that no influence upon value need be inferred, if only it be defensible to distinguish between different outlays in their bearing on costs; or, if it be somehow possible to exclude these cost rents from marginal, price-determining outlays. But for our present purposes it is sufficient to remark that this case of rent cost, accepted by Mill, is distinctly an illustration of the opportunity-cost principle.

In point of fact, also, all this proof that cost is important only as relative cost is, in last analysis, merely another opportunity-cost doctrine. The main difference in this regard between Mill and Ricardo is that Ricardo attempted far more than did Mill in the way of explaining the reduction of wages and interest to a basis of homogeneity, and of tracing the proportionality of outlay cost and of market value to the labor costs of real value. Ricardo can hardly be said to have succeeded: Mill hardly tried. But it is, at any rate, sufficiently evident that capital and

[12] Mill, *op. cit.*, Book III, chap. vi, prop. 9.

labor services, under the form of interest and wages, by the very fact that they are producers' outlays reckoned in terms of money, have somehow for the purposes in hand been reduced to a common denominator of value. The sheer obviousness of it all suffices, in Mill's view, to excuse him from all labor of attention or examination.

But this homogeneity being assumed as a datum, something is done by Mill toward tracing out the determination of these costs, non-relatively, that is, as costs in the ordinary sense rather than as ratios or distributive fractions. Interest is explained as determined through abstinence as cost,—wages by the proportion between capital and the laborers employed by capital,—profit by what is left from price after the expenses of production are covered.

Nor does the mechanism by which market value becomes proportional to outlay cost, or, more accurately, to entrepreneur cost as a whole—rent, however, excluded—receive further elucidation than is contained in the doctrine of the mobility of capital, which, by the way, is a simple application of the principle of opportunity cost. The proportionality of value to profit, so far as profit is something other than interest, is left to be explained by "normals."

CHAPTER VI

CAIRNES

Cairnes's special task was the rehabilitation of the labor-cost theory of value, after the damage visited upon it through the half-hearted support or the semi-abandonment of John Stuart Mill. In the *Leading Principles Restated,* labor cost is set up as the value determinant—not, however, labor cost in terms of time, but in terms of pain, burden, irksomeness. Nor does the doctrine appear to conceive labor as having in itself and in its own right, as an expression of pain, an independent value of its own, which value is, as cost, carried over into the exchange value of the commodities produced by it. Often the thought is more like that of Ricardo, in recognizing, though not with full consistency, the principle of proportionment of value to outlay cost; occasional recourse, that is to say, appears to be made to the mechanism of entrepreneur expenditure. But on the whole Cairnes's doctrine seems rather to be that of labor-purchase cost.

> Cost means sacrifice, ... and the problem of cost of production as bearing on the theory of value, is to ascertain how far and in what way the payment thus made by man . . . . in the barter between him and nature, determines or otherwise influences the exchange value of the products which result.[1]

Under Cairnes's treatment the issue between labor-pain cost and entrepreneur cost is for the first time in English economics clearly drawn. Ricardo, it is true, had worked out a doctrine of entrepreneur cost based upon labor cost as its underlying determinant, but had too often failed both of clarity and of strict consistency in preserving the separateness and the antithesis. Senior had taken the pain-cost point of view, but, scarcely attempting the reconciliation, had over and again lapsed into entrepreneur-cost analysis.

[1] J. E. Cairnes, *Some Leading Principles of Political Economy Newly Expounded,* chap. iii, sec. 5.

Mill, while in the main an exponent of entrepreneur cost, had, at fairly frequent intervals, made some more or less vague appeal to labor-pain cost as basis. But, whatever else may be said in criticism of Cairnes, it must be admitted that, in full consciousness of this confusion, he sets himself earnestly at work to avoid it and to make the applications and the limitations of the labor-cost doctrine clear and precise.

But following upon this preliminary sketch of Cairnes's position, some detail of exposition and criticism is now called for. It is, indeed, to be admitted that as cost items, choice must be made between labor as against wages, and between abstinence as against interest:

> Of all ideas within the range of economic speculation, the two most profoundly opposed to each other are cost and the reward of cost—the sacrifice incurred by man in productive industry, and the return made by nature to man upon that sacrifice. . . . . Cost and remuneration are the economic antitheses of each other; so completely so that a small cost and a large remuneration are exactly equivalent expressions.[2]

But if, on the other hand, wages and profits are to be accepted as the ultimate items, costs, as Cairnes argues, must increase as product increases, since wages and products increase with product and exhaust the product; an increase in the general productiveness of industry would require

> that wages and profits . . . . as an aggregate would rise exactly in proportion as industry had become more productive, and the cost of producing a given commodity, measured in wages and profits, would then remain precisely as before. . . . . There would be less labor and abstinence exerted, but this smaller exertion being more highly remunerated, the cost, measured in the remuneration, would suffer no change: (*ibid.*)

all of which, it is to be remarked, is equally serious for labor as the value determinant; costs, from any point of view, are significant, for value purposes, only as ratios, as purely relative facts.

[2] Cairnes, *op. cit.*, chap. iii, sec. 3.

But that solely in this relative sense are entrepreneur costs conceived by Mill to be relevant to value is not appreciated by Cairnes; though he later makes it quite clear that in no other than this relative sense has labor cost any bearing on the case.[3]

But his objection to the wages-and-profit method of explanation goes deeper than this; he rightly condemns the method as fundamentally explaining nothing; wages and profits are mere remunerations for productive services; as later thought would term them, they are mere distributive shares. The various distributive shares do, of course, exhaust the value product. But to call them, or any of them, costs, and to suppose that thereby the value of the costs is explained, is the sheerest of circular reasoning—if, indeed, it is not worse:

> If it be true that the wages and profits received by the producer of a commodity are the measure of its cost of production, then it follows that all commodities whatever, it matters not under what circumstances produced, whether of competition or of monopoly, exchange and cannot but exchange, in proportion to their costs of production. . . . . In truth, the principle that "cost of production determines value" becomes, when thus understood, little more than an assertion of an identical proposition, since it merely amounts

[3] This, as is well known, is emphasized by Cairnes with reference to international values and international trade, under the principle of comparative costs. In this connection, however, the case is put by him much more strongly than it will stand: "International values . . . . are admittedly, or at all events are demonstrably . . . . not governed by cost of production, and we have thus normal values which are not connected with cost, but come under the influence of some other principle. . . . . What, for instance, is now the grand argument with the people of the United States for the maintenance of protection? Why the high cost of production in that country? And what is the evidence of this high cost of production? Simply the high rates of wages which prevail. How, they ask, can we, with our high-priced labor, compete with the pauper labor of Europe? I must frankly own that accepting the point of view of the current theory of cost, I can find no satisfactory reply to this question, and I am quite sure that Mr. Wells, who implicitly adopts this point of view, has wholly failed to furnish one" (Cairnes, *op. cit.*, chap. iii, sec. 4). Without doubt, the doctrine of comparative labor cost may often,—perhaps commonly and adequately, cover this case; but so does the doctrine of comparative entrepreneur cost; and so, for that matter, would the doctrine of displacement or opportunity cost.

to saying that values are in proportion to the aggregate of the elements of which they are made up.[4]

It must, of course, be held in mind that all of this discussion assumes, in conformity with the classical doctrine and with Mill's version of it, that rent may be and must be excluded from the cost category. But even so, Cairnes's attack looks to be more serious than it really is; this is in part due to the ambiguous use of the term *profit:* Cairnes is using the term as the equivalent of *interest,* the reward of abstinence. But limited to this meaning, Mill would not and could not have assented to the proposition that wages and profits exhaust the value product; only when the unnecessary profits as well as the necessary—the quasi-rent share as well as the cost share in the remunerations of entrepreneurship—are accounted for, can it be said that wages and profits exhaust the total value product. In Mill's use of terms, cost of production commonly falls considerably short of the full value of the product; that is to say, there are unnecessary profits; there are, as later thought would put it, non-marginal producers to whom are accruing quasi-rents of production.

But for the purposes of the present issue, the general nature of cost, Cairnes correctly interprets Mill's position and makes admirably clear the contrasted points of view:

> Mr. Mill discloses with perfect clearness the line of thought by which the view in question has been reached: "What the production of a thing costs to its producer, or its series of producers, is the labor expended in producing it. *If we consider the producer the capitalist who makes the advances, the word labor may be replaced by wages: what the produce costs to him* is the wages which he has had to pay." In other words the point of view is shifted from the ground of human interests to the partial and limited standpoint of the capitalist employer; and the cost of producing an article, which really consists of the sacrifices required of human beings for its production, is only considered so far forth as it is "cost to him," that much more important portion of the cost which is cost to the laborer being put altogether out of view. This point of view being once taken, the rest follows simply and naturally. What is cost to the capitalist, that is to say, his advances, consisting of the profits of previous producers as well as of the wages of laborers, profits as well as wages, must evidently be included in cost; and not only the profits of previous producers, but . . . . the

[4] Cairnes, *op. cit.,* chap. iii, sec. 3.

profits of the producer of that particular commodity whose cost is considered—an extension of the theory which involves this curious consequence, that among the elements of the cost of producing a commodity is counted [part of] the profit obtained on that commodity by the producer, a profit which I need scarcely say is not realized till *after* the commodity is produced. . . . That the laborer's share in the industrial sacrifice is by the current doctrine excluded from the conception of cost of production does not appear to have been seen, or, if seen, to have been adequately appreciated by its adherents. Mr. Mill's language seems to imply that the wages advanced by the capitalist, ... though he admits that they only represent "the cost of producing *to him*," may yet in some way be taken to represent the cost to the laborers also, for, having dealt with this portion of the case, he leads on to the next with the words: "Thus far of labor *or wages*, as an element of cost of production. . . . . There is also capital, etc." But I must absolutely deny that wages can in any way be taken to represent the labor element in cost of production. Wages, as Mr. Mill observed in the passage already quoted, may be regarded as cost to the capitalist who advances them; though it would perhaps be more correct to say that, so far as they go, they *measure* his cost, which really *consists* in the deprivation of immediate enjoyment implied in the fact of the advance. But to the laborer wages are reward, not cost; nor can it be said that they stand in any constant relation to that which really constitutes cost to him.[5]

Cairnes's affirmative position also is clearly set forth:

Cost means sacrifice, and can not, without risk of hopelessly confusing ideas, be identified with anything that is not sacrifice. It represents what man parts with in the barter between him and nature, which must be kept eternally distinct from the return made by nature on that payment. This is the essential nature of cost: and the problem of cost of production as bearing on the theory of value is to ascertain how far and in what way the payment thus made by man to nature in productive industry determines or otherwise influences the exchange value of the products which result.[6]

Bearing in mind, then, that labor-pain cost is here set up as the determinant of value, it remains logically open to Cairnes to take the position that wages and profits are results of value and not causes—are distributive shares and not costs. This is, in fact, his view; product—in the sense of value product—is the source and determinant of all

[5] Cairnes, *op. cit.*, chap. iii, sec. 3. [6] *Ibid.*, chap. iii, sec. 4.

remunerations. This, of course, leaves it the more necessary to discover the determining causes of value. Whether the fact that value is proportional to labor fully satisfies this requirement must for the present be left as an open question. At any rate, Cairnes declines to admit that wages and profits are in any sense determinants:

> The value of the product resulting from industry forms . . . . the source from which . . . . industry is remunerated. Nor is this conclusion invalidated by the fact that . . . . the laborer commonly receives his reward in the form of wages advanced by the capitalist before the product is completed; since what he receives is subsequently recouped to the capitalist, the sum being drawn from the value of the product; so that it is still *the value of the product* from which the remuneration of all concerned in the creation of that product ultimately comes. Wages and profits in each branch of industry are thus derived from the value of the commodities proceeding from that branch of industry, and, as . . . . wages and profits also absorb the whole of that value, it follows that, other things being the same, the aggregate of wages and profits received by any given group of producers will always vary with the aggregate of the value of the commodities which they produce.[7]

And then follows this remarkable and important passage:

> Where wages and profits, therefore, in different occupations are in proportion to the sacrifices undergone, the value of the commodities proceeding from those occupations will always be in proportion to the same sacrifices, that is to say, the commodities will exchange in proportion to their [labor-pain] costs of production.

Precisely how much does this mean? Since it is product which fixes compensations, it must follow that to assume wages to be in proportion to the sacrifices undergone is merely another way of asserting a proportionality of production results to labor burdens; and so it is, for example, true enough that where in two different industries the value products are equal, and the pains of production are equal, the exchange relations will be those of equal values for equal labor pains. This is susceptible of being interpreted as a mere mathematical re-expression of the assumptions made. But is there more in it? Does the thought go upon the Ricardian principle of proportionment of entrepreneur cost to labor-pain cost? Have we here any attempt to explain entrepreneur costs, or to make use in any way of

[7] *Ibid.*, chap. iii, sec. 5.

the entrepreneur mechanism for the purposes of the value problem? The thought is difficult of interpretation—perhaps impossible of interpretation—in this regard.

But when and how far will this proportionality between the labor burdens invested in commodities and the exchange relations of these commodities hold? To the extent that the proportionality is found to hold, and only to this extent, and for the conditions under which it holds, and only for these conditions, does Cairnes stand for the determination of value by labor cost. It may, indeed, turn out that this labor-cost determinant applies only within very narrow limits; but, at any rate, so far as it may be made to apply, something will have been done toward attaining an explanation of value in terms of this ultimate cost; for in Cairnes's view there is no justification for talk of any other kind of cost than this of labor pain. Pain is presented as the condition on which all commodities, or, at all events, all freely reproducible commodities, arrive at man's disposal—it is their purchase price, their cost in the barter of labor for product between man and nature. Mill's fallacy in calling the entrepreneur's outlays costs of production lay, Cairnes insists, in the patent fact that the entrepreneur is not the producer, excepting, of course, to the extent that he is himself a laborer. Not the employer in the shade, Cairnes urges, but the wage-earner sweating in the sun is the person submitted to the pains of production. True, the laborer gets a reward, a wage, more or less adequate; but this reward is not his cost; he is the producer—actually, visibly, mechanically, technologically—and his pain is the cost through which and on terms of which human society obtains possession of its store of consumable goods. And it is hopeless to attempt the justification of the entrepreneur notion of cost as, in terms of expenditure, a market expression of the underlying and ultimate labor-pain reality. Ricardo, it is true, had attempted this, or, more accurately, had assumed it out of hand; but neither to Mill nor to Ricardo was it open; the pains are not in any constant

or necessary relation to the wages received, else in different occupations and in different countries, and at different times in the same country, wages could not vary as they are found to vary.

If wages stood in any constant relation to that which really constitutes [the laborer's] cost, ... wages in all occupations, in all countries, and in all times would be in proportion to the severity of the toil which they recompensed.[8]

[8] *Ibid.*, chap. iii, sec. 3.

Ricardo had assumed without argument, that, as a general proposition and in broad averages, wages are paid in proportion to the painfulness of the employment: thus the entrepreneur outlays and the attendant market values become proportional to the pain costs of real value.

In full sympathy with this general point of view, and in the full conviction that the only definitive and really explanatory concept of cost is the pain-cost concept, Cairnes is yet conscious that wages—labor cost to the employer—are in many cases far wide of proportionality to labor pain. He therefore sets himself to Ricardo's unfinished task, that of finding out when and why and with what necessity of supplementation, the labor-cost theory may still be regarded as tenable.

Ricardo had said that the remuneration must be proportionate to the disutility—the pain—of labor, else the laborer would change to other lines of production, and thereby a readjustment of supplies of product and supplies of labor take place so as to bring the situation back into nearer approach to the normal. That, at the best, this doctrine could go no farther than to assert that the compensation must, *at the minimum*, be proportional to the disutilities, neither Ricardo nor Senior had ever perceived: nor by either had allowance been made for differences in skill and productiveness relatively to the pains of productive effort.

Cairnes, however, makes this allowance. He sees plainly that the rate of remuneration is derivative from the value product, and the distinction is clear in his mind between mere weight-and-tale productiveness and value productiveness: "Under a system of separation of employments, industrial rewards consist for each producer, or, more properly, for each group of producers, employed on a given work, in the value of the commodities which result from their exertions. I say in the *value* of the commodities not in the commodities themselves. . . . . The value of the product resulting from industry forms thus the source from which . . . . industry is remunerated. The laborer commonly receives his reward in the form of wages advanced by the capitalist. . . . . What he receives is subsequently recouped by the capitalist, the sum being drawn from the value of the product; so that it is still the value of the product from which the remuneration . . . . comes."—Cairnes, *op. cit.*, chap. iii, sec. 5.

But all of this being true—and all of it is in point of fact true—what have costs, in the sense of pain, to do with the case? How can they be determinant of value or value be proportional to them? The labor may be the mechanical cause of the product, but with all the existing differences in skill, and with all the differences in the felt

But how far can the principle that values are proportional to the pains of production be extended? Not far certainly, and Cairnes did not claim it to be far:

> Wages and profits will be in proportion to the sacrifices undergone wherever, and only so far as, competition prevails among producers—wherever, and so far only as, laborers and capitalists have an effective choice in selecting among the various occupations presented to them in the industrial field.[9]

No perplexity need be caused by the fact that the discussion refers here only to the proportion between remunerations and pains, since, as Cairnes has sufficiently shown, and as, in fact, all cost theories assume, values of products and remunerations of agents are parallel, and indeed, substantially identical facts. But in order that the remunerations be proportionate to the pains must there not also be necessarily implied an equality of productive powers? Otherwise it will not be true that "each competitor, aiming at the largest reward for his sacrifices, will be drawn toward the occupations which happen at the time to be best remunerated," [10] but only to the occupations in which his remunerations are his best, which is, by the way, precisely the manner and the direction in which each and every man in actual society is now drawn. True, the supply of prod-

burden of labor, how can labor be determinant or measure of value?—that is, be that kind of cost which will express itself in exchange values and determine them? For this Cairnes's answer is that among men of the same grade of skill, and under substantially similar conditions—and only here—can it be said that painfulness of employment commands wages to correspond: so only here are "wages and profits . . . . in proportion to the sacrifices undergone," and therefore here only is it true that "the value of the commodities proceeding from these occupations will also be in proportion to the same sacrifices, that is to say . . . . will exchange in proportion to their costs [pain costs] of production."—Cairnes, *op. cit.*

But, nevertheless, Cairnes was, *in point of view*, essentially right; entrepreneur cost is at the best a superficial explanation of value, and, as explanation of any sort, is valid only for a competitive, pecuniary, exchange economy. Cairnes was groping toward a general value doctrine which should base the supply category upon cost in terms of charge or draught upon the life and the life values of the human race; if, over against this life cost, on the supply side, there could be worked out, on the demand side, a value-in-use or utility calculus expressive of service for the life processes and life purposes of the genus homo, value, as the point where human utility-demand forces are equated against pain-supply resistances, could fairly present itself as ultimate interpretation and explanation of the economic process in society.

[9] *Ibid.*, chap. iii, sec. 5.

[10] *Ibid.*, chap. iii, sec. 5.

ucts proceeding from "the better paid employments will then be increased, and that from the less remunerative reduced," but only upon the assumption of equal skill and effectiveness in production will this process continue "until supply, acting on price, corrects the inequality": otherwise than upon this assumption these inequalities can never be corrected so as to make A's reward stand to A's sacrifice as B's reward is to B's sacrifice, that is to say, so as to bring "remunerations into proportion with the sacrifice undergone."

But it is further to be noted that in order to make this pain-proportion doctrine tenable it must not only be assumed that all men concerned in it are alike in their productive capacity and in their aversion to productive effort, but also that they are alike with respect to the forces of temptations playing upon them to divert them toward non-productive activity; and—what is still more difficult—it must be assumed that each man taken separately is always at one and the same level of skill, of feeling-attitude toward labor, and of feeling-attitude toward the diverting temptations. Free and unlimited competition is, therefore—but in a much more limited sense than Cairnes had in mind, and perhaps hardly even then—"the security for the correspondence of industrial remunerations with sacrifice, and also, and because it is so, the security for the correspondence of the value of commodities with their costs of production."[11]

But how far and under what conditions did Cairnes believe his principle of labor cost adapted to function as the determinant of values?

Only under conditions of free and equal competition—that is to say, only within certain industrial groupings termed by him non-competitive groups—non-competitive in the sense, that is, that this free and equal competition is not to be found across group lines and between the different groups, but only inside each group and between the different members of that group: "What we find, in effect, is, not a whole population competing indiscriminately for all occupations, but a series of industrial layers, within each of which the various candidates for employment possess a real and effective power of selection, while those

[11] *Ibid.*, chap. iii, sec. 5.

occupying the several strata are, for all purposes of effective competition, practically isolated from each other." And inside these different non-competitive groups Cairnes believes competition to be an effective fact, with the produced values and their remunerations proportionate to the pains of production. The foregoing criticism is, therefore, not, for the most part, to be understood as bearing upon the doctrine of non-competitive groups, but only upon the incompleteness and inaccuracy of the description thus far given of the nature of the group within which the competition proportion holds. Surely, for whatever it is worth, it must be admitted that groups of this product-and-sacrifice equality sort could be imagined, and, indeed, may be theoretically constructed, in which the doctrine set up by Cairnes might find itself illustrated.

Possibly enough, also, the proportionality of remuneration to sacrifice might be established, were sacrifice interpreted to include not merely the burdens and pains of production but as well the foregoing of alternative opportunities of product or of recreation. This, however, is not Cairnes's thought, but only that the exchange ratios must be conformed to the direct disutilities of production, else such a readjustment would take place in the application of productive powers as to allow of a larger result in utility relatively to the discomforts imposed. And, as we have seen, there are cases in which the doctrine would, at first sight at least, appear to hold; and other cases also might be admitted, if only still other conditions were accepted as limitations; no serious difficulty would, for example, attach to the doctrine when applied to the Crusoe case, if only Crusoe's environment were homogeneous in opportunity and Crusoe were himself, on all days and during each hour of every day, a constant in strength, in zeal, and in need; or the doctrine would be adequate for a collectivist society, if together with homogeneity of opportunity there were a society made up of men each unchanging as an individual, and absolutely like all of his fellows in his feeling-attitude toward labor and toward the products of labor—or adequate for a competitive society made up of precisely similar human beings, each of whom was self-employed as an inde-

pendent producer, in an environment affording no differentials of advantage from either land or capital.

And now we inquire as to the basis upon which, in Cairnes's view, the non-competitive group is constituted and as to the extent to which these groups may be regarded as actual facts in modern competitive society. For a society of this sort to fulfil Cairnes's requirements, more is necessary than that there exist what is commonly regarded as freedom of competition; for both capitalists and laborers not merely the legal right but the practical power must exist of effective choice between occupations, without obstruction of law, ignorance, or poverty, so that the producer may pass freely from the less to the more lucrative occupation; otherwise "there can be no security . . . . that remunerations shall be brought into correspondence with sacrifice. . . . . How far does competition in this sense prevail in this and other industrial communities?"[12] It is admitted by Cairnes that a great measure of immobility attaches to both capital and labor—that capital, "once embodied in a form suited to actual work . . . . is for the most part incapable of being turned to other uses," and that "the difficulty of transferring labor . . . . is even greater, since we are here in contact with mental as well as physical obstacles." But while all this is true, it is likewise true that not all labor need be mobile in order to have sufficient mobility for the case; new laborers are all the while maturing. So with capital; enough is mobile to make, in conjunction with the streams of new supply, a total of mobility sufficiently large to care in a reasonably short time for irregularities as they arise.

And it is further admitted that this new labor is not in nature, in intelligence, or in acquired skill, adapted to all occupations equally; at the best the choice is within certain tolerably well-defined limits; and it is as subject to these limitations and restrictions, and by virtue of them, that non-competitive groups are constituted; and it is only within

[12] *Ibid.*, chap. iii, sec. 5.

these groups that competition is effective and that the principle of cost of production as a pain quantity can be traced in the determination of value. This limitation or failure in the cost principle does not, however, manifest itself with capital, but only with labor.

"Thus all the products of unskilled labor will," it is said, "exchange for each other in proportion to their costs; as will also all the products of ordinary artisan labor as among themselves." [13] This equality may extend from one department of production to another, e. g., from barometers to watches, if the lines of exclusion are not applicable. It is only within such relations of equality that cost can be a proportioner of value.

Cairnes has now to take account of the fact that many commodities are the product of labor belonging to different industrial circles or levels: What then?

> So far as the two commodities are the products of workers in competition with each other, their values will be governed by cost of production; but so far as they proceed from workers not in competition, they must be governed by that other principle[14]

yet to be expounded—demand and supply.

And here again we stop to question, not the group idea, for this is perhaps intelligible, but the basis of the grouping as it lay in Cairnes's mind. Is it a grouping of laborers according to lines of occupation precisely or substantially similar? Or is it a grouping cutting across these occupation classifications and conforming to levels of ability? And what shall be the test of grading for ability, if not the wages? And as to the equality of laborers inside the group or the equality in the pain quality of their labor—the group homogeneity—one doubts. And in view of the fact that,

> the bulk of the value of each commodity follows one law—say the law of cost, or what we shall afterward find to be the law of reciprocal demand, while a small remaining portion is governed by a different principle,[15]

the determination of value gets passably indeterminate.

[13] Cairnes, *op. cit.* [14] *Ibid.* [15] *Ibid.*

Certainly, as Cairnes explicitly admits, it cannot be that we are

> justified in asserting that the commodities in question exchange . . . . in proportion to their costs of production. . . . . We can only say that they [the values] are so mainly and in their chief elements. . . . . The true conception of a law of costs is thus, not a law governing universally the values of any class of commodities, but that of one governing the values of certain commodities in certain exchanges.[16]

The pain of labor is treated by Cairnes partly as a matter of duration; but the product must also compensate in value for the dangerous quality of the labor required; otherwise, one infers, the labor will change to less hazardous employments. But Cairnes deliberately takes no account of skill as value-determining: "Skill is no part of cost; and I add that no article is dearer than another simply in virtue of the skill bestowed upon it." [17] But, of course, skill may be the result of labor or of abstinence in its acquirement, and in such case it would be an element of cost. *Cost-wise,* the increase in value is not in proportion to the skill, but to the cost of acquisition of the skill. And thus the group appears to contract yet more and to include only those producers who, experiencing equal disutility in labor, and reaping equal returns in product, fulfil also the condition that their qualities and capacities were obtained through a training—or lack of training—of precise equality in point of pains and burdens. But, Cairnes says,

> As a matter of fact the products of most kinds of skilled labor exchange against those of unskilled in a proportion much more favorable to the former than cost of production . . . . would prescribe. But . . . . when the products of skilled labor command these high terms of exchange, the conditions of production are not those in which cost of production would give value.[18]

And sometimes, it is remarked, works of high literary and scientific excellence get lower compensations than lower degrees of skill command.

But here as elsewhere there is no intimation of the

[16] *Ibid.* [17] *Ibid.,* chap. iii, sec. 6. [18] *Ibid.*

manner by which abilities are rated as higher or lower. "No more is this elevated value due to the skill which such products represent, but to the circumstances which limit the possession of the skill to a small number of persons as compared with the demand for these services." [19]

But in a note attention is called to the fact that the discussion "relates to skill of different kinds as existing in the different departments of industry. Within the limits of the same trade or profession, differences of skill will, in general, be accompanied with corresponding differences of remuneration." But here again no notice is taken of the difficulty of measuring skill otherwise than according to the amount of remuneration. And there seems to be entire unconsciousness that in admitting this difference of remuneration inside the same industry, it must follow, either (1) that differences in skill always correspond to differences in cost of attainment, or (2) that the group contemplated by the doctrine is an ability-and-pain rather than an occupation-and-pain classification. Surely, if the classification is one of ability, remunerations will be the same, if ability is measured according to remuneration; but is it to be assumed that the remuneration is proportional to costs of attainment? And if the group is constituted by those only whose costs correspond at the same time with their ability and remunerations, whence shall such a group be selected? But in point of fact, Cairnes appears to admit that all cases where values remunerate forms of skill not acquired through labor burden are cases where the labor-pain-cost principle does not apply—that is to say, are cases falling under the principle of "monopoly." Seemingly also, rent remunerations fall under the monopoly principle, and capital remunerations would do so but for the fact that the creation of capital is presented as having a homogeneous pain cost in the abstinence involved.

To Cairnes, as we have seen, it seems clear that the principle of outlay based upon the market value of the productive agents employed cannot be an ultimate basis and explanation of the market value of the commodity product. "Employers, we are told, cannot afford to pay any class of workers more than their services are worth. Now what is the standard of worth here adopted?" It cannot fairly be

[19] Cairnes, *op. cit.*

replied that the services are worth what they command, if this is offered as an explanation of cost, for this would be to explain value by cost and then cost by value,—the old difficulty of how to stand firmly with both feet in the air:

> According to this conception of "worth" the statement that wages are low because the services they remunerate are of little worth, and high because the worth of the services is high, merely means that wages are high or low because they are high or low, which does not greatly elucidate the problem.[20]

Or if the standard of worth is referred to "the actual terms of the exchange, it amounts to saying that employers cannot afford to pay their workmen more than they actually do pay them." It seems clear to Cairnes that the notion of "*worth* as something varying with the utility embodied in the services or . . . . with the skill which is productive of utility," [21] is, as an explanation of cost or of value, the sheerest of circular reasoning; as, indeed, it is, unless something can be done for the case from some other point of view. And yet Cairnes applies the same notion to explain the different wages "within the limits of the same trade," but refers it all to the monopoly principle working through demand and supply, and denies that it is a question of cost in any sense. All of which seems to mean that this principle of pain cost is a good working principle wherever it will apply—which is, as Senior showed, passably rare,[22] even upon the assumption that the severity and irksomeness of labor are not as variable in quantity and quality as are men in industry, capacity, and feeling.

There is, however, one resource for the case still untried, and to this Cairnes proceeds to appeal; it is the principle of averages, with especial reference to capital costs. Those who deny the actuality of abstinence pain and the necessity of its remuneration, if capital is to be had for productive purposes, must be supposed

> to regard the act of abstaining from present enjoyment as in itself agreeable, and, coupled with the risk which always attends abstinence

[20] *Ibid.* [21] *Ibid.* [22] See page 50, *ante*.

when practised for industrial purposes, as constituting, in some inscrutable way, irrespective of the gains which flow from it, its own reward[23]—

as, we may remark, is sometimes the case, though clearly not to an extent to supply the full existing amount of capital. And even assuming the saving, it does not follow, Cairnes rightly insists, that these savings would be placed at the disposal of industry. So self-denial is posited as the underlying fact, whereby the furnishing of capital becomes a cost in the pain sense of the term.

But of the fact that "the sacrifice involved in a given act of abstinence is very different in the case of different persons or at different times for the same persons," Cairnes says we are to take no account: "The sacrifices . . . . which govern exchange value are, not those undergone by A, B, or C, but the average sacrifices undergone by the class of laborers or capitalists to which the producers of the commodity belong." [24]

But one stops here to object that in this application of the group idea we have a sort of group-abstinence jelly, as before we found for labor—as qualified by skill—a group-labor jelly:

> We may therefore state broadly that differences in the sacrifices incident to production, whether of labor or of abstinence, which are due to peculiarities either in the physical, mental, or moral circumstances of individuals, are to be excluded from consideration in estimating cost of production. What we have to do with is, not individual sacrifice, but the average sacrifice of each individual class.[25]

But precisely how *average* sacrifices could assign individual men to this or that line of activity or to this or that industrial group, is not discussed; and why the average sacrifice should, as a question of cost, have anything to do with the individual remuneration is not clear. Nor evidently would the case be better for Cairnes's purposes if the concept of margins were substituted for that of averages; the same or greater inequality of ratios between pain and remuneration would still obtain.

[23] Cairnes, *op. cit.*, chap. iii, sec. 6. [24] *Ibid.* [25] *Ibid.*

But Cairnes's answer to all this would probably be that within the group a more detailed and accurate distribution takes place; the discussion, at the point in hand, having only to do with that cost which bears upon market value, and the thought facing not in the direction of distribution but of cost. In fact, all the way along in this part of the argument, criticism is especially difficult because of difficulties of interpretation; it is, as we have seen, impossible to make out of what sort these groups are—whether constituted on the basis of the class of commodities produced, or of the pains of production, or of the skill applied, or of the rate of remuneration received. If distribution inside the group is made to depend upon relative pain, it is hard to see how the grouping can be either by skill or by product; and yet it is clear that the grouping cannot be by compensation or by pain. So, precisely of what constitution the labor jelly must be in order that the average of sacrifice should govern the exchange ratios is—at all events to the present writer—incapable of determination.

And in any case, the detail by which values come to be proportional to sacrifices—for after all the doctrine seems to be essentially one of proportions—needs elucidation. Whether we have labor as direct determinant through pain, or as proportioner, or as common denominator measure, is past making out with anything approaching certainty. Sometimes there is a suggestion of opportunity cost, but referring strictly to the laborer or to the abstainer as against the employer or the borrower; that is to say, the relative attractiveness of different industries is calculated, not purely on the basis of burden, but in part upon the basis of the remuneration as somehow related to the burden.

> What at bottom maintains the connection between value and cost of production is, it must always be remembered, the power of choice residing in laborers and capitalists to decide between different occupations. Now what is it determines the choice? No doubt the prospects of the pursuit, the remuneration being compared with the sacrifice. But what sacrifice? . . . . Each takes account of the incidents of the course proposed, as it bears upon himself, and considers how it stands with others equally open to him.[26]

But here it must be objected that just so far as the question is one of remuneration it is not one of burdens—

[26] *Ibid.*

that is, it is not a question of cost in Cairnes's sense of the word, but at best is only for each individual a question of the most desirable ratio between burden and remuneration—this ratio of pain to compensation differing with each difference "in the physical, mental, or moral circumstances of individuals." And if, for the case, refuge should again be taken in the doctrine of averages, the reply would be a fair one that men do not choose occupations or change occupations on this average basis.

At any rate, Cairnes puts it that "carried over into any field of industrial competition," individuals are not remunerated in conformity with the sacrifice which each undergoes; but the conformity holds

among the aggregates of those engaged in the several competing occupations; so that the total remunerations falling to each branch of industry shall bear the same proportion to the total sacrifices undergone in that branch as the total remuneration falling to any other in the same field [industry? grade of labor?] bears to the sacrifices in that other.[27]

The total remuneration is, as we have seen, the value of the total product; "this value, therefore, will bear the same proportion to the sacrifices undergone in producing it, as the value proceeding from any other industry within the same field of competition bears to the sacrifices of which it is the result." [28] So the sacrifices constituting cost, in any field, class, or group, are average sacrifices.[29]

But after all we are inclined to ask ourselves whether the clue to all this is not in the fact that a group means

[27] Cairnes, *op. cit.* [28] *Ibid.*

[29] "The relation which competition establishes between cost and value is one, not between the value of particular commodities and the sacrifices of the individual . . . . but one between commodities taken as sorts and their costs of production. . . . . We cannot, for example, assert that a particular pair of shoes will exchange against a particular coat in proportion to the sacrifices undergone respectively by the shoemaker and the tailor in the actual case; but we may assert that, within a given field of competition, shoes, as one sort of commodity, will exchange against coats in this proportion. The costs, therefore, to which the values of particular commodities correspond are not the particular sacrifices undergone in producing each commodity, but the average sacrifice undergone in producing each sort of commodity . . . . what we have to do with is, not individual sacrifice, but the average sacrifice of each individual class."—*Ibid.*, chap. iii, sec. 6.

nothing more than those producers with whom there exists the same ratio between sacrifices and remunerations. Surely, for a group of this sort, values would be proportionate to sacrifices.

But finally, it is to be remembered that Cairnes does not claim any very wide field for his doctrine: it holds simply where it holds, and where it does not hold the law of demand and supply—reciprocal demand, as Cairnes terms it—is adequate; perhaps also, we may add, for the cases, if any, where it does hold.[30]

If, then, this review of Cairnes is adequate,[31] and if this attempt at rehabilitation of the labor-cost doctrine of value is really the best that can be done, as it is the last important and systematic attempt among English economists, an impartial judgment will probably declare that the effort has served merely to give the doctrine its *coup de grace;* a dogma already in its last gasp has been unkindly done to in the house of its friends.

If, however, any faith should still remain in it for any purpose there is in reserve a seemingly final and crushing argument against it, if once there can be established the possibility of values and exchanges without anything

[30] "The law of reciprocal demand fails completely of being a principle co-ordinate with, and similar to, that of costs. Instead of ruling exchange values in the same way as cost of production, only in another field, it turns out that the force of reciprocal demand is incapable of determining the value of any single good. . . . . The purport of the argument of Cairnes is no more than this: the law of reciprocal demand merely requires the general level of international exchanges to be such that in the long run the exports of a nation just discharge its liabilities, or, in other words, that its exports and imports will be led to balance, except for the payment of interest on foreign debts, cost of carriage to foreign ship-owners, etc. Cairnes applies the law without changing line or point to interchange between non-competing groups. . . . . Cairnes's famous doctrine merely adds emphasis to a point already made by Senior, namely, that the wages of skilled labor are out of proportion to the amount of labor cost remunerated. Though Cairnes rejected the definition of cost as entrepreneur's cost, his whole argument signifies that subjective cost, or pain-cost, can control market value only by way of controlling the wages and interest elements which compose entrepreneur's cost. . . . . The doctrine of non-competing groups signifies that the comparative wages cost of different commodities may fail to represent their comparative labor costs, or specifically, that they do so fail, when we compare the costs of commodities produced by different non-competing groups."—Whittaker, *op. cit.,* p. 123.

[31] I am not, however, sure that it is adequate. I confess to a deal of bewilderment. I can only claim to have tried to understand, but this without much confidence in my accomplishment.

remotely resembling labor-pain cost in the Senior-Cairnes interpretation of the term, or in any interpretation yet consistently formulated. Let us see:

In view of the fact that each independent producer has his evening limit of labor at which more product is at the point of indifference as against more effort, and in view of the old-time doom that, for society as a whole, it is only by the sweat of the brow that bread may be had, there might appear to be, for some purposes, force in the labor-cost doctrine. And if it is objected that work is oftentimes pleasant, that there are countless producers happy in their work—a veritable bliss of toil—it is none the less evident that as long as the desire for product remains unsaturated, as long as more would still be desirable, as long, that is, as the product still retains utility to the individual producer, so long work must be sharply distinguished from play; so long must work be carried beyond the point to which it would go for the mere joy of the working. And it may thus be argued that a positive pain cost will still at the margin bar the way against any possible pleasure economy in the productive process.

But even so, the theory of labor cost by averages or by any scheme of proportion between pains and values, could derive small support from this marginal development of the labor doctrine, so far as it should purport to serve as a method of explaining the terms of exchanges in a competitive, unhomogeneous, wage-earning society. Something, however, might be made out of the doctrine as applying to an isolated—a Crusoe—economy, or, by averages, to a collectivist economy.

But it has by different later writers [32] been made clear that cessation of labor is something more than surcease of the sorrows of working—that leisure has a positive quality, in the recreation that it offers and in the opportunity that it presents of enjoyment through the consumption of those goods to which labor has created the right. Thus, the eight-hour day with its possibly lower wage will reckon, as part offset against this possible loss, an added two hours of leisure. So the artist may have enjoyed every hour of his productive activity, and may leave it, not at the behest of health or eyesight, but at the call of some greater alternative pleasure awaiting him. The choice, indeed, for many workers is—and for all workers conceivably might be—a

[32] Notably by Patten, Clark, and MacFarlane.

choice between pleasant productive activity, on the one hand, and pleasant leisure on the other; and even at the margin, therefore—for even the labor-cost doctrine will have to adopt the marginal analysis—there is no necessity of pain cost.

That is to say, the positive aspect of leisure, in its significance for the cessation of commodity productivity, serves merely to lead us to a newly discovered application of the principle of opportunity cost. But, in truth, a new difficulty here presents itself, though a difficulty with which the present argument has no concern: Is not recreation to be regarded as, in the personal estimate and reckoning, an alternative method of utility production? Is not play productive? And where is the true line of distinction between work and play? (See chap. xxvi.)

CHAPTER VII

FURTHER COST DOCTRINES

Labor cost in non-competitive production. Opportunity cost.—Attention will later be directed to the fact that, for the analysis of exchange value, there is obvious danger in the identification of desire with market demand: only when purchasing power attends desire can economic demand be said to exist. But pushed back into the field of production the difficulty vanishes; here desire and demand are one, since the problem is merely what shall be produced; the ability to produce attends the desire for product. True, the disposition to produce may be wanting; but if so, the case is one which for present purposes requires no consideration. All this is corollary to the fundamental principle of economic science, that for questions of production, need and desire are fundamental, control supply and direct it.

Not merely this, but, in the isolated economy, production includes within itself the essential phenomena of exchange. Inasmuch as not all the things desired can be had in the quantity desired, there must be a choice between the things to be had and the things to be postponed or foregone. Each product costs some other, and the sequence of production follows item by item the course of the demand-desire curve.

Interpreted thus—in the sense of sacrificed opportunity—the labor-pain cost doctrine of value, *as applied to an isolated economy,* and applied upon the assumption that land and other instruments are non-existent or of inconsiderable influence, is not very seriously wide of the truth. Whatever differences in utility may possibly exist between two products attainable by the same quantity of labor, the more useful can have a power of displacement—of exchange against another—only upon the basis of the equality prescribed by the similar labor costs. Marginal production,

in the sense of the point of cessation from work, is reached, when, in each line of product, more product will possess utility not greater than the disutility attending the further production of it, whether the disutility take the form of pain, or of pleasure displacement, or of both. And thus, while the value determinant may conceivably be found in the utility quantum of the marginal product instead of in its pain price, it is still true that this marginal quantum can equally well be expressed, in point of significance, in either of the two ways: (1) as a quantity of utility enjoyed—the hither side of the cessation margin, or (2) as a quantity of advantage foregone—the further side of the margin, since the two quantities are, by the terms of the analysis, equal. And so, while the utility of Crusoe's marginal product could not be stated in terms purely of pain—unless, indeed, Friday were altogether a tiresome companion, the island a savorless island, and Crusoe himself vacant of resources for self-amusement—the utility could always be stated in terms of marginal disadvantage, which marginal disadvantage would serve equally well with marginal utility as the value measure and common denominator of the derived value relations.

But it is important to remark that this equation between the importance of the product and the importance of the items of resistance—whether of disutility or of foregone utility or of both—could convey to no second person any information as to the absolute nature or volume or quality of the opposing and balancing items, but would speak only of the relation between them. The value of the ratio at the margin could be asserted as unity, but nothing could be implied or inferred as to the importance of the terms in the ratio. And evidently with different producers, no basis of comparison could be found either for the utility of the respective products, or for the burdensomeness of the respective efforts, or for the attractiveness of the recreations respectively foregone. Abandonment of production might, for one person, be consistent with great signifi-

cance of product as against great aversion to labor or great disposition toward recreation, while with a second person, the same hours of work and the same commodity output might obtain, consistently with small pains of labor, low appraisal of product, and with little or no interest in the alternatives of pleasure. Only the ratio between the two opposing quantities can be inferred, which ratio is always to be expressed as, at the margin, one of equality, whether the opposing quantities are 5 : 5 or 2 : 2 or ½ : ½.

And, in fact, not even as much as this may seem to imply, is legitimately to be inferred. The principle of homogeneity, precisely as it is inapplicable to the individual's entire day's activity, and is serviceable only as a day's-end margin and measure, fails as a method of comparison over intervals of time. That is to say, Crusoe on different days is, for the purposes of the present analysis, so many different men, with different levels of zeal, vigor, capacity for pleasure, and sensitiveness to pain. Nothing but the equality of ratios holds.

Collectivist production would, for the most part, proceed parallel-wise with production in the isolated individual economy. Production would of necessity accommodate itself to the principle of diminishing item utility with increasing product, and of increasing resistance to productive effort with lengthening hours of labor; the day's-end margin of cessation would be fixed where the group average and aggregate of utility from added effort should appear to be at balance against the effort pain and recreation loss incident to further production.

But here again, not all the product obtained, and conceivably none of it, would be at the cost of pain. In a loose group way, by an estimate of some sort, a margin of effort would be established at which the desire for more product should be equated against the resistance to further production; but this resistance would be in part, and might be in its entirety, the expression of the pull of recreation

utility; that is to say, the retirement margin would rarely, if ever, be entirely a weariness margin, and might be in no measure due to weariness.

Thus, interpreted broadly enough to include not merely labor pain but also—if the case is of the sort so to require—all labor sacrifice reckoned in terms of displacement, whether of pleasure or of product or of both,—a value determinant, or at all events, a value denominator in terms of cost may be found, either for the isolated or for the collectivist economy, if and when the problem can be taken as presented clear of instrument complications; but equally clearly, the denominator may also be stated in terms of the utility product against which the cost stands equated as the purchase price.[1]

Opportunity cost and outlay cost in competitive production.—In no case can the pains or the pleasures of production have significance for market value otherwise than as they bear upon supply—that is, upon the relative volumes of goods seeking exchange against one another. *All market-*

[1] But the labor-cost margin—in no matter what ameliorated sense—will not, as the only margin or as the margin of chief significance, apply where allowance must be made for the presence of productive instruments.

With land instruments and capital instruments, the problem is evidently not one of pain, but of displacement. It is even questionable whether the weariness margin is—even for the independent producer—comparable in degree of significance with the margin of choice between industries. Occupations are chosen each as an aggregate and total and for long periods, and mostly by comparison of the totals of value return. And during all the day, up to the marginal effort, the labor product is affording a differential above its pain cost; but the aggregate magnitude of these quasi-rent quantities differs with different employments, and renders any comparison between industries possible only as employment units and totals: the problem, then, even were no instrument complications involved, could never present itself in terms of pain, but only—if a labor-unit or labor-item question of any sort—as a question of how most advantageously to apply the total labor outlay in view of the aggregate results.

Nor even at the margin can the cessation problem with the independent farmer be one solely of weariness against product: if there is no question of the hired men, their wages and their acquiesence, there are, in any event, to be considered the comfort and welfare of the work-animals.

No issue is intended to be offered here as to the right of pain to stand as one among the many different cost considerations to be over-

cost doctrines are supply doctrines, and explain value only in the sense and to the degree that supply explains value—that is, only upon the assumption that demand may, for the purposes of the case, be taken for granted.

Taking as accepted this principle that, under the cost problem, we are set to investigate exclusively those influences bearing upon supply to limit it, certain typical doctrines of cost, and of the relations of cost to price, await examination.

Let it be assumed that a manufacturer of hats faces the following situation: per unit of product he expends $1 for wages and 50 cents for raw materials; the capital employed in producing a hat would elsewhere earn him 15 cents; as employee in someone's else service, he could earn 15 cents for each hat now produced; transferring himself and his productive equipment to the shoe industry, he could obtain a product of $1.85 in place of each hat now produced; he sells his hats at $2 each: What is his cost of production and what his profit per hat?

According to the older reasoning and the older terminology, the 50 cents accruing to the employer, after the $1 in wages and the 50 cents in materials were covered,

born by the remunerations in prospect. Our wheat-producing farmer, as we shall later more fully see, presents at the same time many different supply margins; e. g., a rent-outlay margin, a wage-outlay margin, an indefinite number of seed, fertilizer, and implement margins, a corn-displacement margin for some portions of his product, a bean-displacement margin for other portions, capital-wear and land-wear margins for some acres of his crop, and, among all the others, pity margins for his draft cattle, his wife, and his children, a mixed decency-and-expediency margin for his employees, and, finally, a weariness margin for himself. And all these margins may be effective at the same time to set a limit, in different places and directions, to his production, and might conceivably converge in influence to dictate the non-production of any particular line of product, or of any particular item of that particular line. And at different price levels for products, and with different producers, new and different combinations of margins would be presented; different supply volumes have different supply prices.

And among all these different margins, no one seems to be more distinctly supply or price determining than any other, excepting in degree of influence; and in fact no one of them appears, from the individual producer's point of view, quite so emphatically price-determining as price-determined: but more of this later.

would be capitalist's *profit*. But what part, if any, of this profit should be reckoned within cost of production?

Keeping closely in touch with the habit of thought of business men, Hadley would, as the present writer understands him, regard profit as that which remains over and above cost of production, and would confine the cost reckoning to outlays.[2] There is room for question as to the 15 cents for interest: if this were paid for borrowed capital, the cost would certainly, in Hadley's view, be $1.65, and the profit 35 cents; perhaps it should be inferred that the same result would present itself were the capital that of the manufacturer himself.

It appears, also, to have no bearing upon the present problem that interest outlays are, in Hadley's thinking, to be regarded as mere wages of past labor and to be ranked under the general head of wage payments.

Recurring, however, again to the principle that cost, for the purposes of economics, whatever may be the preferable view for purposes of bookkeeping, is important only as the master-key to the supply problem—that our quest is the determination of what the French call the *prix de revient*—it becomes evident that $1.50 or $1.65 bears not the slightest relation to cost when conceived as the point

[2] "The excess of return above cost is known as *profit*. The profit of an individual is the difference between money advanced in production and money received from the sale of the product. . . . . Profits are neither more nor less than the excess of the selling price of the products of industry above the money advanced as wages. It is true that some of the investments of an individual capitalist are not made in the form of wages, but in payments for materials and machinery which other capitalists have made ready for use. But if we look at the relation between capitalists as a class and laborers as a class, we shall find that the capitalists as a body advance wages, and appropriate the difference between the price paid to the laborers and that received from the customers."—Arthur Twining Hadley, *Economics*, p. 124.

This appears to leave the question of *interest* in about the condition that James Mill left it; but the problem in hand is another problem; were it true, however, that our present concern led us in the direction of interest theory, it would be worth while to point out that Hadley's definition of *interest* as *commuted profits* is open to this same line of criticism—that it leaves the *time-discount* aspect of interest inadequately accounted for.—*Ibid.*, p. 270.

below which the producer under consideration will decline to produce; he could do better than $1.65 as wage-earner and better yet in shoe production.

Mill's view, while confused in terminology and not fully consistent in reasoning, approaches more nearly to a formulation of the influences affecting the producer's choice between his different industrial openings. Profit is distributed by Mill into interest, wages of superintendence, and compensation for risk. It is true that in one chapter Mill speaks of profit as the excess of receipts over cost of production,[3] while, in another place, he treats minimum profit as a part of necessary price,[4] but as this necessary price is the money magnitude for which we are seeking, and as, in the general trend of his doctrine, Mill identifies cost of production with necessary price, it is in the spirit of his doctrine to regard *minimum* profit as a constituent part of cost of production. It is in this sense that we are to interpret his statement that the necessary price must be an amount sufficient to cover cost and the ordinary expectation of profit. Nothing very satisfactory is offered as to the quantum of this *ordinary profit:* In one place a subsistence-minimum determinant is suggested for capitalists: "They will not even go on producing at a profit less than they can live upon." [5] But not much is made of this view. In general, the doctrine runs:

> The cost of production, together with the ordinary profit, may be called the necessary price or value of all things made by labor and capital.[6] . . . . The latent influence by which the values of things are made to conform to cost of production is the variation that would otherwise take place in the supply of the commodity.[7]

That is to say, Mill divides profit into the two parts, one, a minimum or necessary profit, the other, a surplus

[3] *Principles,* Book III, chap. iii, sec. 1.
[4] *Ibid.,* Book II, chap. xv, sec. 2.
[5] *Ibid.,* Book III, chap. iii, sec. 1.
[6] *Ibid.,* Book III, chap. iii, sec. 1.
[7] *Ibid.,* Book III, chap. iii, sec. 2.

over this necessary minimum. Some part, therefore, of the 35 cents left over after outlays and interest have been covered, is included within the necessary price, the true cost,—enough to allow to the entrepreneur the ordinary rate of profit. Here, it may be noted, is a distinct foreshadowing of the concept of *producer's quasi-rent.* But Mill makes nothing further of it.

Walker, on the contrary, regards these producers' differentials as of controlling importance in the problem of necessary price. Marginal cost of production is taken as the determinant of price, and precisely as land rent is conceived as a surplus over and above cost—a price-determined distributive share and not a cost—so producers' differentials are computed as surpluses above the price-determining margin of production and as such are made irrelevant to price fixation. For, in order to find the price point with manufactured goods, we must, it is said, find the marginal producer's cost, just as with agricultural products we are supposed to find the cost upon marginal land—a point at which there is no differential to be computed.[8]

Entrepreneurs are evidently of differing capacities, precisely as lands are of different grades of fertility; thus, to find the cost-determining production, we must, it is said, find the marginal entrepreneur, the lowest paid among all those producers who can afford to remain in production. Whatever the more skilful entrepreneurs get above this margin is unnecessary, or differential, or surplus profit, or producers' quasi-rent, accordingly as one's choice of terms may dictate.

And thus—returning to our hat manufacturer and his cost problem—it would seem that, in Walker's view, we have not yet sufficient data, either for determining the cost in the sense of the profit necessary to keep the manufacture in the business of production, or for measuring his surplus, his differential gain; we must, it seems, first know

[8] Walker, *Advanced Course,* secs. 119–143, 297–299.

how much his less skilful competitor is making, before we can fix upon the lowest price at which he himself will continue to produce.

But according to the principle of opportunity cost, the best alternative open to our hat-producer is not to lend out his capital and to accept a salaried position; this would give him but 30 cents as his total of interest and personal remuneration, whereas in the shoe industry his unit of product would have a market value of $1.85, permitting 35 cents of return to himself and his capital holdings—that is, 20 cents for his personal remuneration. In the hat industry, however, he is getting $2 of market product; his return in the hat industry may fall to the $1.85 limit before he will decide to change from hat to shoe production. And it is evidently beside the point to urge that his least skilful competitor is deriving, from this market price of $2, only—say—10 cents of personal remuneration. This fact, clearly, gives no basis for arriving at the first man's occupation differential. Nor, more important still, does it necessarily imply that the second man is the man upon the margin of withdrawal or nearest to it. If, getting in the hat business only 10 cents of personal remuneration, his best alternative were yet one cent in shoes, he would still be nine price points distant from withdrawal, whereas another man of very considerably higher absolute profit might be fewer points distant. It is, in truth, entirely credible that the largest profit-maker in the industry should be the marginal producer in that industry. All producers' cost differentials are reckoned from this alternative basis, as quantities derivative from the opportunity-cost margin.

Obviously, only the most general notions and the simplest of the applications of opportunity cost can be presented at this time. One caution, however, appears to be immediately called for; the doctrine of opportunity cost, rightly understood, does not point fundamentally to the question of how much could be realized of gain in some alternative occupa-

tion or activity, but only to how much must be realized in the occupation or activity under consideration in order to insure its continuance. Opportunity considerations, alternatives, are mere data, among others, in the computation, and may or may not be controlling—that is to say, questions of taste, of health, of reputability, of strain or severity of requirement, all may be important factors in the choice. Again, the choice may not lie between two gainful occupations, but between some one gainful occupation and idleness. In short, each man's cost is simply his *prix de revient*, the price requirement upon which the continuance of production by him depends. And evidently his price may differ for differing volumes of product.[9]

[9] The relations of opportunity cost to price, as presented by several of the later writers, will best be examined in connection with the concept of profit—and its relation to cost; see note at close of the next chapter.

So far as the present writer is informed, David I. Greene is entitled to the credit of first having given adequate formulation to this doctrine of opportunity cost—see an article published by him in the January (1894) number of the *Quarterly Journal of Economics*. Without acknowledgment of this contribution, and, indeed, in entire ignorance of it, an article covering very much the same ground was, by the present writer, published in the September (1894) number of the *Journal of Political Economy*, under the title of "The Formula of Sacrifice;" see also, by the present writer, the May (1902) number of the *Quarterly Journal of Economics*, "Proposed Modifications in Austrian Theory and Terminology;" and the November (1905) *Yale Review*, "Doctrinal Tendencies—Fetter, Flux, Seager and Carver."

CHAPTER VIII

PROFIT DEFINED: PROFIT AND RISK AS RELATED TO COST

Risk profit.—Mill's formulation that necessary price must cover, among other things, compensation for risk, is incontestable for all cases where risk is really a fact of cost; but when, if ever, is this the case? Is it, indeed, clear that it is ever the case? And where, then, is the room for risk profit?

If the risk compensation is only sufficient to cover the risk, there is no room for profit. The unharvested crops form, in the long run, part of the cost of the harvested. So the bad debts of the merchant are a part of the cost of getting goods into the hands of the paying customer. Here is evidently a class of risks that are to be included within production costs; and the compensation, being the correlative of a risk assumed and not a reward of personal skill or effort, is, by this very fact, not a part of profit. It is only when the risk remuneration is more than the risk burden that profit can be derived from taking risk.

And in some cases, doubtless, profits of this sort are obtained, as with insurance contracts typically, and with well-organized businesses in the speculative markets. But what shall be said of the risk to which the wholesaler is submitted when he buys his supplies, that prices may fall, or of his hope that prices will rise? Is the gain, if gain befalls, more than compensation for the risk, or is the loss other than the equivalent of the gain which was equally in prospect when the purchase was made?

In point of fact, analysis of risk must distinguish two cases, (1) where the danger of loss has no correlative of gain, and where, therefore, the question is solely as to who shall carry the hazard,—cases which easily lend themselves to the business of making profit off the carrying of risk;

(2) where profit and loss are equally in prospect, or are somehow in the market equated against each other.

It is probable that in this second case, utility falling per item with increased supplies of goods, the chance of gain must, as a computation in terms of dollars, outweigh the appraised money equivalent of the chance of loss, else the falling utility attaching to each dollar would leave the balance slightly one of loss in the individual utility schedule.

But it is only in cases falling under the first class that risk is properly to be reckoned as appreciably an item of cost.

Risk interest.—The relations of risk to interest and of risk interest to profit are perhaps not more intricate in theory, but are even more disastrously confused in traditional economic discussion. Viewed as the reward of abstinence, interest cannot include the risk share in the amount received. Viewed as any sort of compensation to the owner for investment opportunity foregone, risk must be excluded. And as the difference between the present value of goods and their future value, interest cannot cover risk; only as the difference between a certain present value and a contingent future value could the risk charge be included in interest. Adopt, however, the standpoint not of the lender but of the borrower, and the question takes on another aspect. Dishonest borrowing aside, interest becomes a payment for the use of wealth, or, more accurately, a payment for the difference in desirability, to the borrower under consideration, of present over future goods—or, more accurately still, of present over future purchasing power as reckoned in the prevailing standard. For the marginal borrower the interest is the approximate equivalent of this difference.

That is to say, the risk payment is received by the lender in one character and is paid by the borrower in another. It advantages the marginal lender nothing or nearly nothing; the risk fact may, in truth, diminish his net or pure

interest, by its effect to retire some part of the total demand; it burdens the borrower as a cost; it is like a tax imposed on the loan relation.

To whom, then, goes the gain to correspond with the aggregate of loss to borrowers and lenders? It does not necessarily follow that the entire benefit of this intermediate quantity—this tax—accrues to defaulting borrowers. There is room for lenders' quasi-rents in the relation,—that is to say, there may be, in favor of the non-marginal lenders, differentials between what it really costs to carry the risk and the compensation which the market premium upon risk allows.[1] And this is the only case of true risk profit in the interest relation; subject to this modification, the premium is the precise equivalent of the loss danger accepted.

But it remains to ask what name shall be given to this equivalent. It is commonly regarded as a portion of profit; but as it is evidently not remuneration for the personal factor in production or in business activity of any sort—not pay, that is, for labor of superintendence or for any other form of effort, but only compensation for the danger incurred of failing to get compensation—there is force in the view that the special category of risk profit should be recognized. The objection to this is that, just as when one lends his capital he charges something extra for risk, and calls it interest or risk interest, so when he puts his own capital at risk in his own business, he should, it would seem, reckon his risk gain as compensation for the hazardous capital use—another form of risk interest. The losses of an enterprise must ordinarily be paid out of the operator's wealth. Profit-makers pay losses, when losses come, in the capacity of wealth-owners and not of mere operators.

But it has still to be recognized that the thing at hazard is not necessarily and solely the capital invested. The operator may, indeed, be investing nothing but his time and effort; or his hazard may be such as not to extend farther

[1] Cf. Carver, *Quarterly Journal of Economics*, March, 1891.

than the value of the time and effort devoted by him to the enterprise.

There is, then, room for a concept of risk wage; and for this there could be no valid objection to the term *risk profit,* were the term *profit* not already overweighted in point of duties and overclouded with accumulated ambiguities.

The question, then, whether there is any place for the term risk profit is to be decided by the meaning intended to be attached to the term *profit* itself; and in regard to the precise meaning of this term there exists lamentable uncertainty. There is, however, a general consensus of opinion for the exclusion of interest from the concept; and some disposition must be recognized toward the exclusion of wages of superintendence; and if the foregoing analysis of risk be accepted, there is small justification for continuing to include anything commonly indicated under the term risk profit; and for whatever need really exists the term *risk profit* and not *profit* recommends itself.

Risk interest should be extended to cover not merely the hazard compensation of actual lenders but also the hazard compensation of him who adventures his own resources under his own management.[2]

The question remains whether the term profit shall serve (1) merely for exceptional, unclassified, lawless gains—*conjuncture profits* as they have sometimes been called, or whether, on the contrary, the term should stand (2) for the broader notion of compensation for the independently working human factor *in production,* or (3) for the still broader notion of compensation for the independently gain-acquiring human factor in economic activity.

For it must be noted that here as elsewhere there is danger of confusing the technological and socially produc-

[2] Cf. Veblen, *Theory of Business Enterprise,* pp. 120–30, as to the difficulty of finding a time unit for the hazards and gains of high finance.

tive aspects of business with the competitive and gain-making aspects. Number (2) would conceive profits as compensation for independent productive activity, and would thus make no place for a large part of what fall under the general head of conjuncture gains, but would stand, rather, as an opposed and alternative notion. Number (3), the competitive view, would harmonize (1) and (2) by including them.

It has been the writer's preference to use the term profit in this third sense, as denoting, that is, the residual compensation falling to independent business activity after such apportionment as is possible has been made for rent, interest, wages, and other outlays. In this sense, profit stands as merely one form of the remuneration of labor and is thereby a subhead under the broader interpretation of the term wages.[3] It points to gain without the intervention of an employer; it is, then, remuneration to the entrepreneur for entrepreneur activity as such. This profit goes, truly, to him who takes the risk, but does not, therefore, go as compensation for the risk or in proportion to it.[4]

[3] For wages, it should be remembered, are not derivative solely from technological or other productive activity. I may pay my wage-earner to destroy your property or to besmirch your reputation.

[4] The concept here presented is believed to be, in a general way, in harmony with the later trend of economic thought. Taking the recently published works of Professors Carver, Fetter, Flux, Seager, and Seligman, as representative in this regard, it will be profitable to glance at their respective usages. Thomas Nixon Carver, *The Distribution of Wealth,* Macmillan, 1904; Frank A. Fetter, *The Principles of Economics,* The Century Co., 1904; A. W. Flux, *Economic Principles,* Methuen & Co., 1904; Henry Rogers Seager, *Introduction to Economics,* Henry Holt & Co., 1904; Edwin R. A. Seligman, *Principles of Economics,* Longmans, Green & Co., 1905.

Professor Fetter's notion of *profits* is more easily arrived at than that of any one of the other writers under examination: "Profits are the net gain of the enterpriser after counting the rent of material agents and contract wages. . . . . Profits are the income attributable to the enterpriser's services. . . . . Economic profits are not *contract* wages, not being paid by agreement, but being yielded impersonally by the industry. Profits are, however, *economic* wages or the earnings of services. . . . . Profits are due, not to risk, but to superior skill in taking risk. They are . . . . earned in the same sense that the wages of skilled labor are earned."—Fetter, *The Principles of Economics,* chap. xxxi, *passim.*

This is not, one infers, a denial that the taking of risk may be the

characteristic and distinguishing mark of entrepreneurship, but it is a denial that compensation for risk is profit, unless in the measure that compensation is more than the value and burden of the risk.

This falls in with Professor Carver's view that the "profits of insurance are a kind of risk-taker's rent. They owe their existence to the fact that they are not the reward of risk-taking, but that they are a surplus over and above the real risk assumed. [The entrepreneur's risk rent] is due not to the risk he assumes, but to the risks that he does not assume. . . . . Stated more accurately . . . . his net income or profit arises from the fact that he is able to reduce his own risk below that which others would have to bear."—Carver, *Quarterly Journal of Economics,* May, 1901.

Professor Seager defines profits as "balances left over from the sale of products after all of the expenses of production have been paid," a production-category concept.—Seager, *Introduction to Economics,* p. 55.

In a state of normal equilibrium the competition of entrepreneurs would bring it about that "the profits of entrepreneurs would just cover wages of management."—*Ibid.,* p. 172.

It is thus evident that in arriving at the profit remainder, Seager would conceive of compensation for one's own land and capital as a form of expense, "virtually an expense," as he puts it elsewhere; this leaves profit substantially as Fetter conceives it, with some doubt possible as to the precise relation in Seager's view between risk and profit, and, for Fetter's case, with some ambiguity as to whether profit is a production category or a gain category.

Professor Flux's notion of profit is more difficult to make plain: but it is formulated in better recognition of the latter-day forms of business organization.

Under entrepreneur, that is, under non-corporate management, profits are seemingly regarded as in approximate parallel with wages:

"So long as the business man was in large degree owner and manager at the same time, his remuneration naturally covered the return to capital and to organizing effort. . . . . The growing use of capital by other than its owners required the separation of the remuneration of the capitalist . . . . from that of the undertaker. . . . . Later we have seen the growth of a great system of joint stock enterprise. . . . . The replacement of the independent owner of business enterprises by a salaried manager seems to suggest a further analysis of profit."

But under the non-corporate form of organization, "the capable entrepreneur reaps a reward corresponding to his superiority over the less capable man with whom he is in competition. . . . . If he gets the use of capital on better terms, it is because of the lower risk associated with his control than with that of the others who pay a higher rate. . . . . The gains of the highly remunerated entrepreneur . . . . are certainly not secured by enforcing harder terms on labor than labor secures from rivals. . . . . Whether the earnings of employers who just maintain themselves as employers be regarded as made up wholly of wages . . . . and in no degree of profits; whether we call the whole of the earnings, even of these entrepreneurs, profits, the important implication of this view of the case will be substantially the same. . . . .

[But] the later organization separates the remuneration of the manager from that of the owner. . . . . The distributive share known as profits, then, has in practice, had the remuneration of the services of management cut out of it. What is left, profits proper, represents the share of those who take risks and assume the responsibility of directing the general lines of policy which the manager is to carry out."—Flux, *Economic Principles,* chap. x, *passim.*

Fully worked out, however, this more actual treatment would not diverge, for theoretical purposes, and for terminology, from the wage-view of profit. Doubtless different forms of personal activity are included within the function of ordinary entrepreneur managership; some of the these activities are more detailed or more clerical in nature than others; but in any case all are personal activity and are remunerated as such. That a part are delegated—the less responsible part—to salaried employees, leaves the residuum of remuneration none the less a remuneration for personal activity, a wage impersonally received from the market without the intervention of an employer. The dividends to stockholders are, then, in part true interest, in part higher gains received because of the danger of not getting any gains or of losing the principal, in part profit due to differentials between the burdensomeness of the risk and its compensation, and in part reward for the function of ultimate supervision. It is not to the point for present purposes to ask whether, as an ethical or social problem, these last are more or less than adequate.

Professor Carver's concept is more nearly in line with the later German terminology; wages of management are excluded.

Notwithstanding the fact that in one place he notes that "it would be expensive . . . . to grow wheat on land worth $1,000 an acre for market gardening; such land is worth $1,000 an acre for that purpose because of the large profit that can be made in that business; to grow wheat would be a sacrifice of these profits" (*ibid.,* p. 42)—a use of profits in the sense of aggregate net return—his more careful formulation restricts the notion to "only that which is left over after all the other shares are paid" (*ibid.,* p. 278). Risk profit, by which is meant the excess in the payment for the risk over the actual burden of it, and skill in bargaining whereby productive agents are "more frequently employed at a price slightly under than slightly over their marginal productivity, explain the fact that business men *as a class* receive a share in addition to their net wages, rent, and interest" (*ibid.,* p. 269); that is to say, profits are something over and above wages of management.

But on the whole, if these authors may be taken as representative, there appears to be in economic usage some clearing-up of the old indefiniteness in the meaning of the term profits, together with a marked tendency to regard profit as merely a subhead under the general principle of wages—one form of remuneration for the personal factor in economic activity.

Professor Seligman's general notion of profit would appear to be in line with this trend:

The remuneration of the entrepreneur, or the man who carries on the enterprise, is called the profit. Among them, wages, interest or rent, and profits exhaust the whole income. (Seligman, *Principles of Economics,* p. 352.) Profits are the income from business enterprise.

(*Ibid.*, p. 353.) But on p. 427 it is said: "Profits . . . . are the chief inducement to enterprise. The anticipated gains to be derived from fluctuations in value constitute the real incentive to business activity, and hence to modern production."

In this last it is implied, not only that profits cover merely such part of entrepreneur income as is due to value fluctuations, but also that modern productive enterprise would cease to function were these conjuncture gains eliminated—if, that is to say, "a state of normal equilibrium" were realized. And with profit so defined, what becomes of that part of the entrepreneur's share not due to value fluctuations? For we are to remember that "wages, interest or rent, and profits exhaust the whole income." This share must seemingly be regarded as falling under the head of *wages of management.*

What, according to Professor Seligman, is to be computed as profit in the hat-and-shoe problem (p. 88)? "The remuneration of the entrepreneur, or the man who carries on the enterprise, is called profit. . . . . Wages, rent or interest, and profit exhaust the whole income." Under this formulation 35 cents per hat is profit; but under the second formulation—"the gain to be derived from fluctuations in value"—no answer is yet forthcoming.

If it may be assumed that the cost investigation is important only as bearing on the supply term of the value equation, and that with any individual producer the problem of cost is the problem of how much pay he must receive in order not to abandon or restrict his production, it must be clear that the hat-producer in our assumed case will submit to a price of $1.85 before shifting to the shoe industry, and that the wage opening of 15 cents has no immediate bearing on the case: $1.85 is the cost of production; 15 cents is a producer's differential, a "quasi-rent of production," or an "unnecessary profit"—or an excess above minimum profit, or whatever else it may be preferred to call it.

But how about the following formulation? "Profits are always a surplus; they are the difference between the cost of production and the selling price" (p. 353). "The excess of price above cost of production constitutes profit" (p. 354). On p. 357, however, it is said that "wages are a stipulated income, and profits a residual income"—suggesting again the 35-cent solution; but it is immediately added: "Wages are part of cost; profits a surplus over cost." And likewise on p. 356 it is asserted: "Profits are the return from the conduct of business enterprise"—a 35-cent view; but shortly afterward, upon the same page: "Interest is a part of cost; profit is a surplus above cost"—probably, as it now looks, a 15-cent view. But this must finally depend upon what cost of production is held to be.

But evidently a producer must have something for his services; only this something need not be called profit; still it is, as we have seen, sometimes so called. Sometimes, however, the usage falters:

"The gross earnings would suffice to give him a bare compensation for his services, for otherwise he would enter some other employment as a wage-earner. [Necessarily as wage-earner? or necessarily, if as wage-earner, in some other line of employment?] Gross profits must include interest and wages. But there would be no net profit, or surplus profit, or profit in the real sense of the word" (p. 354).

Merely noting, in passing, that the necessary wage is here made part of cost, it becomes evident that this necessary wage is not made a part of "net, or surplus profits, or profits in the real sense;" profits are, on the contrary, here presented as that part of personal compensa-

tion above the amount required for the continuance of the business; they are differential profits in the sense of that other terminology that holds that "the remuneration of the entrepreneur, or the man who carries on the business, is called profit" (p. 352); "Profits are the income from business enterprise" (p. 353). This *net, surplus,* or *real-profit* concept, then, denotes a differential above necessary cost, and gives us 15 cents as the solution of our problem; and this goes logically along with the doctrine that, "profits . . . . are the difference between the cost of production and the selling price (p. 353). The excess of price over cost constitutes profit (p. 354). At the bottom of the scale is the *marginal* producer working under the least favorable circumstances, and who can nevertheless get no more for his goods. With him price equals cost. The excess of price over cost constitutes profits" (p. 354).

But still another concept of profits presents itself: "Profits are the surplus of the intra-marginal over the marginal producer" (p. 353); not now, be it noted, a surplus above what one must have to keep him in the business, but a surplus above what someone else, the marginal producer, must have to keep the marginal producer in the business. This, as will be recalled, was Walker's view; and profit with Walker was likewise presented as no part of cost; what you get more than somebody else gets is no part of your cost; it follows that price is determined by the cost of the poorest incapable in the trade, it being irrelevant that he may also be so entirely worthless for any other possible thing that he would not change occupations at any, no matter how great, fall in price; and the profits *unnecessary* to hold in the trade the master-minds of the entrepreneur world are whatever they are getting more than this rear-guard good-for-naught.

And in line with this terminology it appears—as it consistently ought—that this poor fellow is getting no profits; which must mean, according to the earlier formulation, that he is getting no differential above his best alternative—which obviously may or may not be true, and is, perhaps, as likely to be true of the most prosperous among his competitors.

Consistently with this concept, no solution is possible for our problem; upon the data given, no single entrepreneur, other than this single-footed incapable at the alleged margin, could ever by any possibility determine his own or anyone's else cost of production.

Bearing in mind that "net or surplus profit, or profit in the real sense," has been defined as surplus over cost—producer's differential above necessary remuneration—we approach still another concept of profit—a notion something like the German *Conjuntur-Profit.* Those compensations accruing to personal activity and management, over and above what must be ascribed to the land and other equipment of the entrepreneur, may undoubtedly be divided accordingly as they are or are not due to changing conditions—to market fluctuations—tardy competition—conditions which are, in any society, always in process of coming not to be, and which in stationary conditions must in time be canceled through the complete working of competition. That is to say, there is one portion of the entrepreneur's income which may be said to belong to him by a sort of permanent desert and right; full and complete competition would only serve to make this share more secure and definite; while there is another part which befalls irregularly, by luck and hazard, and without ethical basis, or claim of any merit other than, possibly, of farsightedness, and only through the perversities and tangles of things. There are, we repeat, gains of this latter sort, as

truly as there are residuals which the disappearance of these fortuitous influences would never reduce or menace. Our author's present concept of profits contemplates these fortuitous quantities: "Profits are a result of price, not a cause of price. Products at a lower cost create profit; competition forces prices down to lower cost and eliminates profits. Profits can be maintained only by the creation of a continually newer cost-level lower than the new price (p. 357). . . . . For as soon as profit appeared, the entrepreneurs in other fields who were just making expenses would at once bid against each other to secure capital and labor, until they would capture their share of the market, and the profits would dissipate themselves, on the one hand in the higher rate paid for the factors of production, and, on the other hand, in the lower price of the product due to the greater supply (p. 354). . . . . It may conceivably happen, indeed, that all the producers at a particular moment are men of precisely the same abilities and subject to the same conditions. . . . . There would be only one identical cost for all units of the supply. There could, then, ... not be any permanent profit to all the producers, because prices could not permanently remain above the mere cost of producing" (p. 245).

It is evident enough that, on this basis, no precise answer can be given to the inquiry as to how much of the entrepreneur's gain is due to his own productive activity, and how much to the gifts of fortune, through the flux and change of processes and values. Neither our problem as stated nor any other problem could present materials from which this notion of profit could arrive at a money statement. And with this uncertainty as to the competitive share of the remuneration there must go also an equal indefiniteness as to the other share—the right, due, earned, just, enduring share. Thus this fifth or sixth variety of profit appears to promise greater service in ethical—or possibly sociological—discussion than in the field of economic analysis. It remains, however, certain that something of this rightful and natural share there must be—quantitatively and qualitatively vague doubtless, but existent. But we find it written:

"Wages differ from profits in that wages are a stipulated income and profits a residual income. . . . . Wages are a part of cost, profits a surplus above cost. The entreprenuer may think that he deserves a return for his services, but whether he secures one depends upon his competitors. There is always a certain level below which wages cannot fall, because no work would otherwise be done; but the very continuance of competitive profit depends upon the abler producer cutting down cost to the point where the marginal producer earns no profits (p. 357). In society in a state of rest . . . . the marginal producer would hardly make both ends meet, but would earn nothing above his cost" (p. 246).

This last statement seems to imply that all compensation that does not accrue as gift of fortune is cost—that is, is necessary compensation. Thus the doctrine which under stable equilibrium would deny to any producer anything above his necessary remuneration would amount to assigning to him in his best field of activity precisely what—and no more than what—he would be worth in his next best field, this ethically *just* ending in the strange perversity of measuring what one can do, not by what he does, but by what he would do if he did not do so much.

It is evident enough that we are thus far all the while within the field of individualistic entrepreneur cost; and in this field there is still one more cost concept to be presented:

"To the employer cost means total cash outlay expended in production;" and it is added: "Here the cost is usually less than the price, the difference between cost [cash outlay] and price being profit." This, however, may possibly not be fairly interpreted as a fifth—or sixth—profit concept, since the notion of profit here held would finally resolve itself into total remuneration for entrepreneur activity.

Professor Flux's interpretation of the relations of profit to cost is to be deduced from the following:

"The influence of cost is felt in determining whether it is profitable to produce that supply, in view of securing the price so determined, whether the supply can be, economically speaking, maintained. . . . . The term 'supply price' here used means a price adequate to induce producers to prepare, and offer for exchange, a supply corresponding to that price. It must therefore be a price sufficient to cover cost of production, and, if competition be vigorous, the excess over cost of production will not be more than sufficient to afford such profits as competitors need to secure in order to continue in competition. Some writers use the phrase 'necessary profits' to apply to the level to which competition tends to reduce profits, and such 'necessary' profits are often taken to be included in cost of production" (pp. 52 and 57).

Stopping merely to note that *expenses of production* and *cost of production* are here used as interchangeable terms, we deduce from the passage cited that the amount to be fixed as the cost requirement is not necessarily $1.85 or $1.80, but is a sum "not more than sufficient to afford such profits as competitors need in order to continue in production." Profits which would content other producers are the "necessary profits" for this producer, whether or not—one takes it—he finds himself on any other ground able to be contented.

Fetter holds that, "the value of the product as a whole cannot be related to the psychic cost or sacrifices ["pain, fatigue, irksomeness of labor"] and therefore it cannot serve as a measure of cost in everyday business. Alternative cost is any good or gratification that must be given up when any other good is chosen. In this sense each thing is a cost of every other thing that might be chosen in the place of it. Alternative cost is, therefore, manifold and indefinite. The thought is significant at the moment of choice, but is not constantly measurable for practical purposes. Money cost is the practical cost generally implied in the term cost of production. . . . . The enterpriser's costs determine the lowest price at which he can continue to sell, but if successful, he may have a wider margin of profit" (p. 274).

Recalling that Fetter's definition of profit is "the income attributable to the enterpriser's services," and remembering that displacement costs must not be regarded, and that only the "money paid out by the producer" is "practical cost," $1.50 or $1.65 must be Fetter's solution of the problem in hand. And yet $1.65 is clearly not "the lowest price at which he can continue to sell;" it is much lower than the lowest.

With Seager the distinction between *cost of production and expenses of production* is significant. In cost he reflects the old doctrine of pain cost—psychic cost, as Fetter has it—but with the addition of some modern doctrine about displaced leisure and displaced consumption-time. "The sum of the efforts and sacrifices that are involved in

production constitute . . . . the cost of production. . . . . Effort, ... exercise which involves some discomfort or pain . . . . sacrifices, ... the doing of things that are less pleasurable than other things that might have been done but free from any element of pain" (p. 53). Just what use or part this kind of cost has in Seager's system of theory is not easy to get at; but "contrasted with the costs of production which are psychological or subjective, are the *expenses* of production—advances made for materials and other things which co-operate in bringing about productive results. The latter are objective and may be expressed as sums of money comparable with the prices received for products" (p. 54).

Whether these costs are confined to those technological facts which aid in bringing about productive results—a social concept of productiveness—or whether "all other things" includes expenses for patents, royalties, franchises, privileges, good-will, legislative and municipal favors, etc.—that is, whether the production under consideration is conceived private-wise and competitively, as matter of individual acquisition, need not concern us here. At any rate, "the *expenses of production* include every item of outlay which producers must normally and regularly incur to put goods on the market and effect their sale, and also such compensation as producers normally and regularly require as the condition of their continuing to serve industrial society in the capacity of entrepreneurs. These items are as follows: (1) Outlay for materials, wear and tear of buildings and machinery, etc., which may be included under the *expenses of replacing capital goods used up in production.* (2) Premiums paid for the insurance of capital goods. (3) Interest for the use of capital. (4) Wages to laborers of all grades. (5) Rent of land and natural power used in production. (6) Taxes. (7) Minimum profits to the entrepreneur to remunerate him for his own time and trouble" (p. 157.)

What then would be Seager's answer to our hat-cost problem? How much as cost shall be allowed under the head of minimum profits? Seager has a displacement-cost doctrine; but wage or salary alternatives are the only ones admitted to consideration: "The amount that should be charged as wages of management or minimum profit is what the entrepreneur could obtain for his services if he worked for wages or for a salary for a corporation or other employer" (p. 159). One dollar and eighty cents is then the answer. But it is nevertheless clear that at anything short of $1.85 he will shift to shoe production.

Now let the problem be modified somewhat; let the raw materials and the wages aggregate $1.50 as before, but assume an interest outpayment of 10 cents, the employer using his own capital to the interest value of 5 cents. Will this modify the solutions given? Not with Seager: *expenses* are to be understood as including interest items of this sort: "The item appears whether, in the particular business, borrowed capital or capital belonging to the firm is used. . . . . It is virtual outlay." Precisely so: but *expenses* strikes one as a passably poor term to denote the interest on one's own capital; and it is outlay of any sort only in the sense of a displacement fact—an opportunity cost.

It is difficult to be certain of what Fetter would make of this case, though it is fair to suppose that, by some sort of recognition of this phase of displacement cost, he would somehow arrive at a conclusion similar to that of Seager. And for him also the awkwardness would

present itself of making this cost fall within "the sum of money paid out by the producer."

With Flux likewise the solution would probably be the same, though it does not clearly appear how, unless upon the ground that other and competing producers would not be satisfied were their capital not earning a certain specified rate, which rate the shoe manufacturer is thereby justified in computing as within his *expenses.*

Carver's definition of profit as what is left over "after the other shares are paid," these other shares including wages of superintendence, obviously excludes profits from the case, but none the less leaves it to be asked what relation entrepreneur activity holds to costs and to value.

Accepting one formulation, "The amount of effort which is necessary to produce a given quantity, say a pound, of one commodity may be widely different from that which is necessary to produce the same quantity of another. . . . . When it requires a great deal of effort to produce an article, no one will ordinarily be tempted to make that effort unless the article has a great deal of value. . . . . Speaking generally, an article must have value enough to persuade men to make whatever effort is necessary to its production, or it will not be made at all. . . . . That is to say, its value cannot be permanently much above or below its cost of production" (p. 31)—we are far from any answer to our problem; the principle of value is here stated as one of pain costs to the employed producer; the doctrine is not an entrepreneur money-cost doctrine in any sense; the "efforts necessary to its production" are not employer facts. For the purposes of the problem in hand, this is an *impasse.*

But Carver has an opportunity-cost doctrine which promises better: "If there are many and excellent opportunities for the employment of one's labor and capital, and their earnings consequently large, much will be sacrificed in withdrawing them from those other possible openings, and only the surplus above this large amount can count as the earnings of the land. . . . . If a certain individual with a certain amount of labor and capital at his disposal can earn $1,000 a year by working for other people . . . . a piece of land upon which he with his capital could produce a total crop worth only $1,000 would be worth nothing to him, but one upon which he could produce a crop worth $1,200 would be worth approximately $200 a year" (p. 188).

Like Seager's view, this appears to conceive the displacement cost as fixed by the wage or salary opportunity; $1.80 is therefore Carver's solution.

CHAPTER IX

EARLY UTILITY THEORY: SAY

Dr. Sewall[1] has made it clear that, in the main, early value theory—for what there was of it—was of the labor-cost tenor. Mercantilism, for the most part, conceived labor as the basis of value, the notion standing, both for labor and for product, as one of intrinsic or natural value as an objective quality.

The Physiocrats also were pronouncedly objective in their notion of value, identifying wealth with material objects, and value intermediately with cost of production, truly,—but finally and essentially, with the material land product embodied in a commodity, and especially with the subsistence material consumed by the artisans. And if it be historically the fact that the wage level of French labor left no surplus above the subsistence requirement of that time, it must be admitted that the doctrine as held did not seriously misinterpret the facts with which it had to do; wages cost and subsistence cost must, under the conditions assumed, be approximately equal.

But there were in Italy, even as early as the sixteenth century, the beginnings of the other line of thought. Davanzati (1588) recognized clearly the notion of utility as subjective fact and as determinative of exchange value. "A disgusting thing is a rat; but in the siege of Cesalino one of them was sold for 200 florins, on account of the great scarcity; and it was not dear, for he who sold it died and he who bought it escaped." So Turgot (France, 1775), following Galiani (Naples, 1750), explained value,

[1] Hannah Robie Sewall, Ph.D., "The Theory of Value before Adam Smith," *Publications of American Economic Association,* 1901.

psychologically and subjectively, as the effect of conditions acting through feeling.

But the first systematic exponent of the utility school of value was J. B. Say.[2]

Inasmuch as the need of things must lie behind the labor production of them, and the need of product lie behind the esteem accorded to instruments of production, desire being the psychological explanation for the putting-forth of effort, it seemed clear to Say that the ultimate explanation of value must be found, not in cost, but in utility. From the point of view of motive, consumption is fundamental to production; thereby the process of valuation must, in the last analysis, be a question of the relation of product to consumption, and not of product to production.

But note that, accordingly as economic affairs are differently conceived, this may or may not involve the proposition that demand precedes supply and controls it. In the collectivist or in the isolated-individual economy, desire and demand, as we have seen, are one. And in a competitive exchange-value economy, viewing society as a whole, and regarding, for the purposes of the case, the existence or non-existence of a money intermediate as irrelevant, total supply is total demand; demand and supply are merely different aspects of the same aggregate of commodities. But if, on the other hand, commodities are regarded, not as an aggregate but as made up of separate kinds and classes, it must be true that only effective demand, demand coupled with purchasing power, can control and direct supply; and this is especially and obtrusively true under a money economy.

Say, however, saw no occasion to trouble himself with these refinements. He accepted the obvious truth that price cannot continuously remain beneath cost of production; nevertheless, not the cost but the utility determines what the purchaser may be made to pay; if the product is not useful, no one will pay anything for it, no matter what the cost:

[2] Say, *Traité d'économie politique;* all references are to the 8th edition, Guillaumin et Cie, Paris, 1876.

Where a receptacle is placed under a fountain, the sides of the receptacle do not determine the flow of the water, though they do prevent the level of the water from falling below a certain point.[3]

Ricardo would, however, have taken no issue here. On August 15, 1815, he wrote to Say,

The utility of things is unquestionably the basis of their value. But the degree of their utility cannot be the measure of their value; the measure is in the difficulty of production.

But Say, on his part, is careful not to assert that utility measures value, but only that value measures utility.[4] His position seems to be that the utility determines the value, causes it, and thus, under the general principle that the quantum of cause may be inferred from the magnitude of its effect, gets measured in it; utility, being purely an individual matter, cannot express or measure market value, but, through demand, it determines the market value, which market value is thus the sole medium of expression, the sole common denominator, in which, whether accurately or approximately, the social or general esteem for utility receives its statement.

Thus interpreted, the issue between Say and Ricardo may be formulated about as follows:

Ricardo, admitting the fundamental rôle of utility and not at all denying the directive character of demand, treats demand as practically a constant, and explains value variations through variations in the relative labor application.

Say emphasizes variations in demand as fundamental and directive, but gives to variations in supply full account by way of variations in entrepreneur cost:

The need of a thing causes the demand; the expenses necessary to produce the thing limit the supply. If to the consumer the thing is worth its cost, the thing gets purchased.[5]

[3] Say, *op. cit.*, Book I, chap. i, p. 61.

[4] "You accuse me of saying that utility is the measure of value. I thought I had always said that the value that men attach to a thing is the measure of the utility that they find in it."—Letter to Ricardo, December 2, 1815.

[5] Say to Ricardo, July 19, 1821.

Value, in Ricardo's doctrine, is proportional to labor—through entrepreneur cost, it is true—but exclusive of land and capital disturbances. With Say, value is proportional to entrepreneur cost inclusive of rent and interest outlays.

Ricardo would have labor measure value, labor itself the while receiving no measure. With Say, value measures utility, value receiving no measure.

In answer to Ricardo's vigorous denial that the value of the labor determines the value of the product, "a view which I strive with all my might to refute," and his insistence that it is only the comparative quantity of labor that rules the relative value of products,[6] Say objects that there is really no distinction, since "you cannot determine the quantity of labor except according to the price that you pay for it"[7]—that is to say, labor, unless it can be shown to possess some basis of original and fundamental homogeneity, must be rendered into terms of value before a proportion can be based upon it; but thereby labor must itself have received a measure. Still, it was not fairly open to Say to condemn this for its question-begging quality, in view of the fact, as we shall later see, that his own course of argument ran as follows: having traced value upon the demand side, to utility, he appeals upon the supply side, as does Ricardo, to the entrepreneur mechanism and explains the values of the products by the values of the costs; and then, to explain the values of the costs, reverts to the value of the products.[8]

[6] Ricardo to Say, January 15, 1820.

[7] Say to Ricardo, November 2, 1820.

[8] It will, perhaps, be well to report the precise words of this correspondence, in the terms of the authority from which it is taken; Ricardo's letters, were, however, originally written in English:

Ricardo to Say, August 15, 1815: "L'utilité des choses est incontestablement le fondement de leur valeur; mais le degré de leur utilité ne saurait être la mesure de leur valeur. Une marchandise d'une production difficile sera toujours plus chère que celle que l'on produit aisément, quand même les hommes conviendraient unanimement quelle est plus utile que l'autre. Il est bien vrai qu'il faut qu'un produit soit utile pour avoir de la valeur; mais la *difficulté* de sa production est la seule mesure de sa valeur."

Say to Ricardo, December 2, 1815: "Il faut que je me sois bien mal expliqué, puisque vous m'accusez d'avoir dit que l'utilité était la

Ricardo in a letter to Malthus, October 10, 1820, says of Say:

> He pretends that a commodity is valuable in proportion to its utility. This would be true if buyers only regulated the prices of commodities. . . . . But the buyers have the least in the world to do with regulating the price; it is all done by the competition of the sellers.

And again, on November 24, 1820:

> I do not dispute the influence of demand on the price of corn or on the price of other things, but supply follows close at its heels, and soon takes the power of regulating price into its own hands.[9]

It is not, however, clear that Say asserts value to be in proportion to utility. His position is merely that value *measures* utility; in ultimate analysis, also—though it is not clear that Say recognized it—value cannot be in proportion to utility, since being a purely personal category, utility to one man is not commensurable with utility to another man; only through affecting demand can utility be relevant to market value. And the case stands the same if

mesure de la valeur; tandis que je croyais avoir toujours dit que la valeur que les hommes attachent à une chose est la mesure de l'utilité qu'ils trouvent en elle. . . . . Je conviens de même, avec vous, que la valeur d'un produit ne peut pas baisser audessous de ce que coutent les difficultés de sa production. Si les hommes estiment que son utilité vaut ce prix-là, ils le produisent; s'ils estiment que son utilité ne vaut pas ce prix-là, ils ne le produisent pas."

Ricardo to Say, January 11, 1820: "Vous me paraissez avoir mal comprit une de mes propositions. Je ne dis pas que c'est *la valeur du travail* qui regle la *valeur des produits;* c'est une opinion que je cherche, de tout mon pouvoir, a détruire. Je dis que c'est la *quantité comparative du travail* nécessaire à la production qui regle la valeur relative des produits."

Say to Ricardo, March 2, 1820: "Je vous avoue que je ne comprends pas trop la différence que vous établissez entre la *valeur du travail* qui ne détermine pas la valeur des produits, et la quantité du travail nécessaire à leur production qui détermine la valeur des produits. Il me semble que vous ne pouvez déterminer la quantité et la qualité du travail que par le prix que l'on paie pour l'obtenir. C'est du moins ce que j'ai toujours entendu par la quantité de ce service productif que j'ai appellé service industriel. Son prix fait partie des frais de production, et vous-même établissez tres-justement que l'ensemble des frais de production regle la valeur du produit."—*Œuvres diverses de J. B. Say,* Paris, Guillaumin et Cie, 1848, Vol. IV, pp. 409–15, *passim.*

[9] Bonar, *Letters of Ricardo to Malthus,* p. 172.

carried out to the marginal analysis; the marginal buyer may consume at a very high rate of utility or at a very low rate. At the margin, as elsewhere under the competitive system, things go, not according to the highest utility, not to those persons to whom the greatest service would accrue, but to those whose estimate of utility is highest relatively to other things,—to those persons, namely, who will forego the largest market-value total; the rich man buys what the poor man goes without.

But Say is nevertheless right in asserting the value measure of utility to be a fact, in the sense that by price some sort of appraisal of utility is expressed in terms of a *standard,* no matter how wide of strict proportionality to utility the price may fall, or how loose and inaccurate a measure it may be, and no matter to what man, marginal or other, it may be a measure—and would perhaps be right in asserting that there can be no other measure; and he might, perhaps, have also done well to deny—if, indeed, he did not deny—that there can be any measure of value, except, of course, in some conventional standard, like this of money. Has, in truth, value any other statement than by equivalency in other things of value? Will values reduce to homogeneous utility? Say did not assert that they would; later writers, fortunately or otherwise, have so asserted.

The value of a thing, in Say's view, rests upon the fact that the thing has utility; this value indicates that "it is esteemed as highly as a certain quantity of another indicated thing." [10] But this value presents not the owner's valuation nor that of any other individual: it is a fact of general estimation, a question of what will be paid—seemingly some sort of vague foreshadowing of the society-as-an-organism concept.

"The price of products is established in each market at the limit fixed by the cost of production, provided that the utility which is ascribed to the products promotes the desire to acquire them." [11] It remains, then, to seek out the causes

[10] Say, *Traité d'économie politique,* Livre II, chap. i, p. 333, 8th ed. Paris: Guillaumin et Cie, 1876.

[11] *Ibid.,* p. 341.

which determine the prices of the productive agents (*fonds productifs*).[12]

Say's doctrine is that utility is primary and cost the resistance, which cost is determined by the values borne by the productive agents employed. This makes value in the agent a cause of value in the product; but directly the value of the product will be made the source of value in the agent. And it is not made clear what relation the entrepreneur's services hold to the result. Do these also give value at the same time that they receive it?

Say admits that if production were merely a matter of labor, with all labor at one level of efficiency and of wage, those products requiring equal amounts of labor would have relative prices to correspond. But land and capital come in, and different qualities of men and of land come in, and products are the dearer the more and the dearer are, in the aggregate, the productive energies employed in bringing them to market. "The price will be the sum necessary to pay the expenses indispensable to the creation of the commodity."[13]

Say has small regard for the view that all differences in wages are explained by the different costs of rearing and of preparation, so that, all the data being considered, all wages are equal. And if exception is made of native talent and of circumstances of environment, these exceptions, he rightly insists, invalidate the rule.[14]

It is interesting to note that Say has, nevertheless, a doctrine of real value and of real cost. In general conformity with the reasonings of Smith and Ricardo, real value and real cost are worked out as dependent upon the pain conditions of production and expressive of them. So real value may fall while exchange values are not affected —a clear recognition of the fact that only relative costs are important for exchange value.[15]

But to return to Say's explanation for the valuation of

[12] *Ibid.*, p. 342.
Fonds productifs are something more, in Say's thought, than the mere objective physical facts: they are valued—funded—and thereby capable of functioning as cost data.

[13] *Ibid.*, p. 342. [14] *Ibid.*, p. 343. [15] *Ibid.*, pp. 343–52.

cost goods: It is interesting to note that all of this discussion falls, with him, under the head of distribution. Say, like J. S. Mill, takes value and distribution to be parts of one problem. And if wages and interest are costs and, as such, influence value, this conclusion seems to be inevitable; incomes, while distributive shares to their recipients, are costs to those who disburse them as production outlays. There is no escape from this unless in denying that distributive shares are determined by values. And this seems to say that it is only the classical school who can separate value and distribution; and in the main they did not, though it is true that subsistence cost for wages and abstinence cost for interest were each, upon occasion, appealed to as determinants of the compensations fundamental to value. The later school cannot logically make the separation—and yet, as we shall see, they somehow make it. It is, however, to be said that, otherwise than upon this separatist treatment, the position of the later school would appear somewhat too obtrusively to involve this circuity of explaining costs by value and value by costs.[16]

The current value of these productive agents (*fonds*) . . . . is established according to the same principle as the value of other things. . . . . But the quantity demanded cannot have as motive the satisfaction of consumption. A field or a factory does not directly procure any satisfaction for its possessor. Their value comes, then, from the value of the product which can be derived from them, this depending, in turn, upon the use that can be made of the product, the satisfaction that can be derived from it.[17]

[16] Nor, if scientific explanation or intelligible exposition is the end in view, is it a sufficient disposition of the case to declare it organic, and thereby to assert or infer that circular reasoning is both justifiable and inevitable. This is simply to throw up the hands, to abandon the problem. There may, it is true, be nothing else for it, but if this is so, let it be so said and an end made of the talking: surely by those who assume explanation to be impossible, the offering of further explanations is gratuitous.

In this connection, a note of Say's at the bottom of page 373 will be of interest: "I have long doubted whether in the plan of this work I should develop what relates to value before what relates to production, that which shows the nature of the produced fact before the manner of its production. It has seemed to me that in order to understand the foundations of value it is necessary to know in what the costs of production consist, and, to that end, to form in advance wide and accurate notions of the agents of production and of the services which may be derived from them."

[17] Say, *op. cit.*, p. 367.

The foregoing would seem to deny the influence of cost and to place the determination of value entirely with utility. And to assert, as does Say elsewhere, that each cost has its value as such in proportion to the value that it produces, does not, as has already been noted, appear greatly to help the case.

But later, this doctrine receives a supplement which may perhaps suffice to save it; agents of production do not get their value directly from the product, but as agents to be combined with entrepreneur activity, and to function with it and under the hire of it, in the production of value; their remuneration, therefore, is not precisely the market value of their product, even if, as Say believes, this be, with accuracy, separately ascertainable, but is merely the market value of their co-operation in value production—a quite distinguishable thing:

> Whoever controls labor or land or capital is a merchant of that commodity which we call a productive service. . . . . Entrepreneurs [note the term] are nothing but intermediaries who, according to the demand there is for a product, bid for the productive services necessary for the making of it. By comparing the prices with the costs necessary to the production of this or that product, entrepreneurs decide to produce this or that product, and establish the demand for all productive services, and, on the demand side, furnish the basis for arriving at the market value of these services.

The quantity of services offered is the supply basis for this value.[18]

Sympathetically interpreted, nothing quite so modern as this is to be found in any of the modern books: no doubt, however, this sympathetic interpretation reads into Say's doctrine more than he himself saw in it; his explanation of the value of the agent really errs in being over-direct—in making the value of the agent to be in theoretically strict proportion to the value of the product. Still, he does not precisely say this; according to him, the different distributive shares, however received—whether directly from production, or as hire-paid, daily or weekly, or yearly, and whether wages or rent or interest—are derived through the entrepreneur, "but in whatever manner this revenue is

[18] *Op. cit.*, p. 372.

received, it is always in the same right, and its source is always a produced value:" in objection to which, or in amendment of which in point of possible ambiguity, it is to be remarked that when a remuneration is received through an entrepreneur, there is no knowing precisely what the value product of the agent is; and were this knowable, there is no theoretical warrant for believing that the remuneration will equal the product or be proportional to it. (See below, chap. xxii.)

Say's doctrine of rent also reads like some chapter out of the latest of modern thought: Whether land be good or bad, its annual revenue will be the same ratio to its total value,—say the twentieth; this rent may be expressed as a per cent. or as a per-acre quantity, and it is in the latter sense only that good land may command rent a hundred times greater than poor land. "Comparing the value of the product with the sale price gives the rent of the land, and the rent of good land cannot be higher than the rent of poor land" (in this sense of ratio).[19]

We must note, however, that this perfect equality of ratio between the total value of different lands and the term value productivity of these respective lands assumes, not merely the distinguishability and separate appraisability of the product, but also a perfect homogeneity in the quality of the cultivators. Were these all alike in preferences and

[19] *Op. cit.*, p. 433.

This paragraph is so important as to call for the author's precise words: "En comparant un bon terrain avec ce qu'il coûte, on pourrait croire qu'il ne rapporte pas plus qu'un mauvais; et, en effêt un arpent dont on rétire cent francs et qui coûte d'achat trois mille francs, ne rapport pas plus qu'un arpent dont on rétire seulement dix francs et qui ne coûte que trois cent francs. Dans l'un et l'autre cas, la terre rend à son propriétaire, chaque année, le trentième de sa valeur. Mais qui ne voit que c'est le produit annuel qui a élevé la valeur du fonds? La valeur du produit comparé avec le prix d'achat fait la *rente de la terre,* et la rente d'une bonne terre peut n'être pas supérieure à la rente d'une terre mediocre; tandis que le *profit foncier* est la valeur du produit annuel comparé avec l'étendue du terrain; et c'est sous ce rapport que le profit que rend un arpet de bon terrain peut être cent fois superieur a celui d'un mauvais."

This, it will be noted, is the view in support of which Professor Fetter has marshaled all the resources of wide historical research and of keen theoretical analysis. It may now be hoped that this truth, having so long awaited its second statement, may, in its later and more scholarly presentation, have the good fortune not to be again forgotten.

aptitudes and in cleverness of bargaining, or were all land alike in point of adaptation to varying methods, e. g., to intensive and extensive methods of cultivation, and alike also in adaptation to the varying preferences, tastes, aspirations, and skill of the cultivators, the proportion would, truly, be a constant between the market value of the agent and its value productivity. With facts as they are, this proportion can be asserted only between the market value of the land and the market value of its value productivity; this last proportion, however, means nothing for the present purpose, since the market value of the rent-bearer is nothing but the capitalization of the prospective rentals according to the current market rate for such investments.

> Savings and capital applied to the land become part of it; . . . . they lose the nature of capital and become land funds.[20]

One part of the national capital is diminished to the corresponding increase of another part. It is thus evident that Say cannot possibly concur in Ricardo's notion of the relation of rent to cost and to value. Ricardo arrived at his labor-proportion doctrine of value, first, by reducing capital to labor and, second, by excluding rent from the computation —that is, by placing value fixation at the land margin. It is probable that this service to the labor-cost doctrine was all or nearly all that, in Ricardo's mind, these tributary doctrines were ever good for. Recalling, however, that the labor-proportion theory was worked out by him through the entrepreneur mechanism, the notion becomes untenable that as a problem in entrepreneur cost the expense of production is greater upon marginal land than upon other land, or that as a question of entrepreneurship—of the personal margin as against the instrument or agent margin —the marginal cultivator is more likely to be upon marginal than upon other land. The question is, therefore, ultimately—and we have finally arrived at it—whether in the cost investigation we are concerned with social labor-purchase cost as against competitive entrepreneur cost, or with agent and instrument margins as against that marginal entrepreneur in whose processes of choice all agents and instruments, marginal or other, are mere data. And finally —but as less difficult—there is the problem whether, upon a value basis, marginal land or marginal capital or marginal

[20] *Op. cit.*, p. 435.

labor can mean anything more than valueless land, valueless capital, or valueless labor—the equivalents of free land, free capital, and free labor—economically, that is to say, no land, no capital, no labor.

At any rate, it is clear that the argument that the rent of better land does not enter into cost of production, since, for whatever more is advanced as rent, there is a corresponding increase of product, would equally well apply to exclude wages or interest from cost.

As we have seen, there is never, in the crucible of entrepreneurship, any accurate correspondence between the outlays of *different* entrepreneurs and the addition to product; in truth, the varying proportions in which different entrepreneurs employ the different productive agents should suffice as proof of this; but for the purposes in hand this need not be insisted upon. Rent *as a differential of price paid for a differential of service* is, as cost, not distinguishable from wages or interest.

> Ricardo . . . . shows that the rent is not the cause but the effect of the need felt for wheat; and the reasons which he adduces will serve to prove against him that the other expenses of production, notably the wages of labor, are likewise not the cause but the effect of the current price of the product.[21]

And in summary Say remarks:

> The ideas of David Ricardo have been of service to me in correcting several parts of this treatise, principally in what has relation to money; but he has supplied me with no single improvement to introduce in that which relates to rents (*profits fonciers*).[22]

Verily Say was a modern of the moderns.

[21] Say, *op. cit.*, p. 438, note.

[22] *Ibid.*, p. 438.

Malthus: Despite marked shrewdness of observation and great originality of insight, Malthus' muddle-headed quality in theoretical thinking leaves not much to be had from him for value doctrine. Bearing in mind that the purpose of the work in hand is constructive rather than primarily historical or critical, and therefore does not concern itself with tracing the growth of theory, or with outlining the systems of thought of different writers, excepting to the extent that—as a method of presentation and mostly irrespective of the personal or systematic interest, as such—these different positions may, illustratively or by statement and criticism, be made to serve the purposes of exposition, we shall decide that the views of Malthus need not long detain us.

As has been already noted, he was by full and frank profession, a disciple of the labor theory of value—but all the while with some

misgivings and with some reservations. For even though, causally speaking, labor was admittedly the determinant of value, yet, as a question of exchange power, of relations between commodities, and as a problem of the choice of a value measure, it appeared to him much more relevant to ask how much a commodity will command of labor wherewith to produce more commodities, than to inquire into the quantity of labor invested some time in the past in its production. And so Malthus stood for the labor measure of value, but this in terms of labor purchasable instead of labor expended, and with the emphasis upon service in terms of labor spared to the purchaser or of the service offered through the purchased goods.

In Malthus' controversy with James Mill as to the possibility of a general glut, this same issue is in the background and takes a position of controlling importance. In that controversy Malthus restates the issue as substantially whether commodities in general may be selling at less than their costs of production. His argument (*Definitions in Political Economy,* London, John Murray, 1827, pp. 44 ff.) proceeds upon distinctly entrepreneur cost lines, regards rent payments as, for purposes of cost, precisely like other outlays, and finds the practical test, for that practical man who is trying to decide whether the market is overdone, to be in the equality of money intake with money outgo: "The hop planter who takes a hundred bags of hops to Wighill fair, thinks little more about the supply of hats and shoes than he does about the spots on the sun. What does he think about, then? And what does he want to exchange his hops for? Mr. Mill seems to be of opinion that it would show great ignorance of political economy to say that what he wants is money; yet . . . . it really is money which he wants and . . . . this money he must obtain, in the present state of society, in exchange for the great mass of what he has brought to market, or he will be unable to carry on his business as a hop-planter; . . . . he must pay the rent of his hop ground in money [this being presumbaly so fixed by agreement]. . . . . He must pay for his poles, his bags, his implements, etc., in money. . . . . He must pay the . . . . laborers which he employs upon his grounds, during the course of the next year, in money, and . . . . it is in money alone of all the articles brought to the fair, that he can calculate his profits. . . . . True, ... the landlords and laborers who are paid in money will finally exchange it for something else, as no one enjoys money in kind except the miser: but the landlord . . . . would be little likely to accept from the hop-planter the articles which he could get at the fair in exchange for his hops. . . . . And as matter of fact, the laborer . . . . is paid in money. Foreign trade is no doubt mainly a trade of barter. But the question whether British woolens find an adequate market in the United States does not depend upon their purchasing the same quantity of tobacco as usual, but upon whether the tobacco, or whatever the return may be, will purchase the British money or the British labor necessary to enable the woolen manufacturer to carry on his business successfully. If both woolen manufacturers and tobacco are below the cost of production in money or labor, both parties may be carrying on a losing trade. . . . . This is the answer to the pamphlet which Mr. M. Say addressed to me several years ago. . . . . The power of replacing capital will mainly depend on the power of commanding labor. . . . . Commodities in general, and corn most particularly, are continually rising or falling in money price . . . . while the money price of labor remains much

more nearly the same. . . . . What are the costs of production? They are either the amount of *money* necessary to pay the labor worked up in the commodity, and in the tools, etc. . . . . with the ordinary profit, etc. . . . . or they are the quantity of labor in kind, etc. . . . . Now surely, it cannot be denied theoretically, that all commodities produced in this country may fall in comparison with a commodity produced in Mexico. As little can it be denied, theoretically, that all commodities produced by British labor may fall as compared with that labor."

From another point of view, and for other purposes, Malthus' doctrine of a general glut will later occupy us further. For the present, the sole concern is to make clear the distinction, as it lay in Malthus' mind, between labor as the cause of value and labor as the measure of value—and particularly to make it clear that this labor-purchase notion, this forward- rather than backward-looking view, is a groping effort toward utility rather than cost as the basis of value. The value of the goods is taken to rest rather upon the service to be obtained from the goods than upon the labor expended in their production.

CHAPTER X

THE CAPITAL CONCEPT

Precisely why the *distribuendum* in society should be taken to be the produce annually to be divided, as against a weekly or monthly or decennial division, is not clear; but it is clear that unless the distributive process is conceived as carried on concurrently with the productive process, there is no reason why the annual term is not as serviceable as any other.

We are not yet ready for a full consideration of the notion and nature of the social dividend;[1] broadly, however, it may be taken to indicate the aggregate social output of consumption goods—commodities, benefits, enjoyments—all things, in short, accruing to men as economic income, in any given unit of time. It is, indeed, sufficiently difficult to make precise the content and limitations of this social-dividend concept and of the distributive-income concept; and it may be inexpedient to attempt here even to place the interrogation points. If the textile worker makes you a suiting, and the tailor makes this into a suit, no one would question that both the making of the cloth and the making-up of it into a suit are services—items contributing to your real income. But how if you make your own cloth? or mend your own coat? These also are facts of income, results enjoyed, but are they thereby the subject-matter of the distributive process? Are they parts of the social dividend for any purposes of theoretical analysis or of the practical applications of doctrine? Are you a producer when you cook your own food? The restaurant-keeper and the boarding-house mistress render utilities of a highly important order; their activities are productive, and the products thereof are parts of the great distribuendum. So the house servant and the house cook are likewise productive

[1] See chap. xxvi.

of distributed utilities—goods of attention, convenience, comfort, or show, as well as of cleanliness, palatability, and digestibility. It is, then, inadmissible to deny productivity to the housewife equally with the bread-winner; house-bound women are something more than supervisors and directors of the consumption process; they are producers. But, even so, does this avail to include their products within the goods which get distributed? Or is there a line of distinction between produced goods and distributed goods, accordingly as these goods do or do not go through the crucible of market valuation? And if this be the dividing line, must not the home-grown and home-consumed eggs and chickens and pork of the farmer be set outside the distributive problem merely because they never reach the market?

And this is not the only difficulty, nor is it, for theoretical purposes, the most perplexing difficulty. A goodly part of each man's purchasing power is expended in the direction of services, in the more limited sense of goods not fixed and embodied in matter.[2] One pays to be cured

[2] No one will today deny the productivity of the preacher or singer or actor; nor is today the distinction between material and immaterial of great significance anywhere for economic science—quite irrespective of the long-standing but lately much-litigated problem as to the philosophical justification for any such distinction. It is well, however, to appreciate the aspect in which the question appealed to the earlier economists.

Mercantilist thought had, it is true, abandoned the cameralistic point of view, according to which all economic inquiry regarded solely the prince's welfare in the administration of his private estate—the ends proposed being simply the maximum possible revenue and the highest level of dynastic prosperity.

But Mercantilism was none the less consistently national in its point of view, as distinguished from individualistic and personal; and it was competitively national as distinguished from social or cosmopolitan. How, indeed, shall any people grow in economic power as against its neighboring enemies? by piling up wealth, by goodly accumulations of munitions and moneys and credits against the time of conflict. And how shall any man or nation become wealthy, except by selling more than is bought in, by keeping consumption under production? And how so well extend your personal economic dominion over your neighbor and over your neighbor's possessions—his desirable daughter included—as by getting him into debt to you? Or how so well render yourself strong, and at the same time your competitor nation weak, as by getting it into debt to you, or better yet, by getting its purchasing

of his ills, or of his ennui, to be passively exercised by the masseur, to be solaced by the ministrations of the pianist, the vocalist, and the elocutionist. Instead of our looking at pictures, the orator or the actor paints pictures in our minds. But suppose one plays the violin, not for another's, but for his own enjoyment, and without monetary recompense; or provides his own exercise, paints revery-wise his own dream pictures, cures his own ills, basks in the sun to his own great warmth and enjoyment, and, in general, has a good time; once again, is all of this production? Or, if not, is the basis of the distinction that these activities or passivities fail of getting valued in the market? Or is it rather that they are entirely internal? Or is it that they are free goods to be had without any sort of sacrifice, by play rather than by work? In truth, we are again in face of the difficulty of defining play. Is the essential characteristic of it in its non-productivity, or rather in its non-sacrifice character, the free-goods quality of its product? In fine, what, accurately, do we mean by production?

Putting aside for the time being these more or less

power into your own control, through cornering its medium of exchange? And how accomplish all or any of these things unless by selling your victim neighbor or nation more than you buy back? Thus conceived, with the nationalistic emphasis, the whole question becomes not primarily one of income, or of aggregate satisfactions and total consumption, but of accumulation, and especially of growth in wealth under the form of foreign credits or other ready international purchasing power.

Proceeding from substantially the same point of view, the physiocratic school seemed to itself to have discovered a method better yet—accumulation truly, but accumulation rather of population than of wealth. Artisans consumed as much wealth as they produced; the social cost of their product was as great as their product. Manufacturers were regarded as, in Dr. Franklin's phrase, "subsistence metamorphosed." Agricultural laborers also consumed all that they produced or, at all events, all that they received in wages, and seemingly must always command so small a wage as to make this a permanent fact; whatever the product of labor and land together might be, the excess in produce over the laborers' wage and necessary subsistence must go to the landowner as the equivalent and expression of the productiveness of the land. So with agricultural, also, as with artisan labor, the social cost canceled the social product; only the land was productive of *net product*. But even so, there was this difference between artisan labor and agricultural labor, that artisan labor did not increase the total population maintainable in the country, gave forth no

gratuitous difficulties, it may be said that economic commodities—products for economic purposes—are restricted to those desirable things which are not free. But especially is it to our present purposes to note that this is not quite the same thing as a restriction to those facts produced by labor or attainable only through labor. For there is much value no part of which, or but a small part of which, is labor-produced; and some of it is not labor-wise obtainable. The productivity of what is broadly called land manifests itself in part in values of this sort based upon qualities of original fertility, or upon non-produced facts like scenery, location, springs, mines, water-powers. It is the fact of limited supply of products and of their value standing derivative from this limitation, rather than of mere labor origin or labor limitation, that gives any agent or instrument its right to claim productivity for itself; environment is as truly productive as is organism.

Utility and the necessity of sacrifice for its enjoyment appear, then, to be the only requisites of value. All valuable

subsistence product, no life material, while the product of agriculture may be regarded as population, expressed in the form of its raw material. And it seemed clear that national supremacy was rather a question of population than of accrued wealth.

It follows also that, inasmuch as the laborer received only enough to live upon anyway, there was small use, and some harm, in trying to tax him; the only man who, having a product net, a surplus, could pay, was the landlord, the rent-gatherer; if the laborers paid taxes, it must be at the expense of their number. It followed from all this, then, that the program fundamental to national greatness was to foster agriculture as a life-maintainer, the sole source of increasing population, and to tax the land.

Adam Smith, coming into the national point of view as an inheritance from earlier thought, set himself deliberately to the investigation of the causes, and to the formulation of the rules, making for the increase of the opulence of nations, and found that while manufactures were productive, they were not so *in the same sense as agriculture,* while labor as mere service was not productive at all. The shadow of physiocratic reasoning was still over Adam Smith.

Not having arrived fully and consistently at the individual point of view in economic analysis, John Stuart Mill followed substantially in the footsteps of Adam Smith: Unproductive consumption is consumption that does not furnish maintenance for productive labor; productive labor is, in turn, that labor which affords an addition to the aggregate accumulated wealth possessions of society; thereby he arrived at the distinction between material and immaterial. But this distinction

consumption goods are *products* either of labor or of environment; and the problem of distribution has ultimately to do only with consumption goods.

If all consumption goods are products, it remains to ask of what they are the products; and how many are the factors of production, through which contribution is made to the supply of things, facts, and conditions possessing value?

It is to be kept carefully in mind that even though the question is stated as one of the factors making for value product, this search for factors is none the less a search for the objectively existing facts, means, intermediaries, and instruments, conditioning the existence of the value product, and standing, with reference to the product-result, in a physical-causal relation as the first term in the force-cause sequence. That is to say, the point of view and method of approach are, in the more inclusive sense of the terms, mechanical and technological in significance. Surely in a sense, *but in a quite different sense,* monopolies, patents, good-will, trade-marks, etc., are productive; incomes go

between material and immaterial rested not at all upon considerations of utility, of importance for consumption, in the aspect of service to human needs, nor finally and fundamentally upon some test of concrete reality, or of tangibility, or of materiality in any philosophical sense, but solely upon the aspect of permanency. For in a general way, that which is material and tangible is enduring; at any rate, that which is not material, which has no substantiality, is evanescent; in coming to be it ceases to be. Thus only material things can add to national wealth. And that some forms of material wealth are themselves very temporary in their existence, e. g., ice cream, leaves the line between the material and the immaterial none the less an actual line and, at the same time, a line which coincides practically with the line between the things that add to national accumulated riches and the things that do not.

All of which was excellent for its purpose, and need have occasioned no perplexity or controversy, if only Mill had not fallen into the error of following his predecessors in their bad choice of terms; for the line which he was really seeking was not that between the productive and the non-productive, or between the material and the immaterial, or between the tangible and the intangible, but merely the line between the accumulatable and the non-accumulatable. Interpreting his terms *productive* and *non-productive* in this sense, no difficulty is presented, excepting, perhaps, with regard to the significance of the distinction, as seen from the point of view of a more modern analysis and of its theoretical needs.

with them, they are capitalized into market values, and are sold in the investment markets; that is, they are acquisitively productive for the purposes of private interests and of individual ownership; they are, in fact, differential opportunities reduced to private property, and enjoyed, as is the essential fact of private property, under the right of exclusion of all other claimants. These property rights, many of them purely distributive in ultimate bearing, are nevertheless not readily distinguishable, excepting upon technological grounds, from ownership in lands or other rentable and productive instrumental goods.

But conceiving of the productive process technologically, what different productive categories demand recognition?

The fundamental distinction would seem to be that between man, as agent-laborer and producer, as over against the aids, auxiliaries, and instruments employed by him. This parallels the distinction between organism and environment, and corresponds accurately with the nature of income as received (1) by virtue of personal activities, and (2) as derivative from possessions.

Accepting, for the time being without question, this first category, that of the human actor manifesting himself in economic production under the aspect of human labor, we turn to inquire whether the aggregate of productive possessions is to be further distributed into the prevailing land and capital categories, and, if so, whether the distinction between land and capital is to be rested solely upon their different relations to the technology of industrial processes, or is to be justified under some further and different principle.

Waiving for the present the question whether, *as factors of production,* any distinction other than technological is admissible, we confine our inquiry to the validity of the distinction as based solely upon technological considerations. For technological purposes, then, is land weath to be distinguished from other weath?

The extractive industries—the industries of raw material, the industries primary and basic in human life—depend upon the land, land in this sense being, of course, taken to include seas and rivers and mines. This distinction between extractive, or primary, and industrial, or secondary, coincides for the most part with the distinction between agriculture and manufactures, and is doubtless of very considerable significance for certain purposes. But it evidently will not serve as a basis for a distinction between land wealth and other wealth, since not the extractive industries alone, but all industries, employ land; and since all extractive industries make, under present conditions, use of capital. Even as a distinction of degree it will not hold; some of the extractive industries, mining for example, are pronouncedly, even prevailingly, capital-using in their technique: and even the most simple and primitive of extractive employments make appreciable use of non-land instruments.

It is, however, none the less true that not merely food and raw material, but building-sites, standing-room, air, climate, scenery, neighborhood, etc., are markedly and emphatically of land character or of land origin. And it is equally unquestionable that capital goods achieve some things not attainable through any possible substitute, precisely as other commodities are in a peculiar degree, or exclusively, dependent on labor. You cannot have timber from labor or capital; neither land nor capital will dance you a skirt dance; and if you desire a certain peculiar quality of screeching, you must resort to a phonograph or to a calliope as against any form of land or labor.

But note once again how purely technological all of this is; for while it is true that labor and capital, when denied recourse to land in the non-value and purely concrete and physical sense, will yield no timber, it is at the same time true that they will give timber plentifully enough if strictly limited in their application to valueless land, that is, if confined to what, in the economic

and value sense, is no-land. And some day the technology of timber production may make of timber a laboratory product.

And it is all the while to be remembered that these technological differences and specializations, while of unquestionable actuality, are, in fact, as marked between one item of land and another, or between one item of capital goods and another, or between one laborer and another, as between capital goods and labor, labor and land, or land and capital. For market purposes agricultural machinery is more closely akin to wheat land than to machinery for watch or chronometer production; cotton lands are, from the same point of view, more like sheep than like timber lands or iron lands, or wheat lands; in point of products, violin and sea are not more unlike than virtuoso and sailor, or than prima donna and stoker.

In truth, also, if productive factors are to be distinguished according to technological considerations, not two or three but countless categories of productive factors will have to be recognized.[3]

But in point of degree of technological[4] specialization, is this threefold classification better founded? Capital is, for

[3] It must, however, be admitted that this does not quite cover the difficulty; nor at this stage of the discussion is adequate treatment of the difficulty readily possible.

For, after all is said, it must remain true that, technologically considered, as mechanical and instrumental facts, a broad and general distinction between land and other production goods will require recognition. But it is the more necessary to determine the precise purposes for which the distinction is important, and the extent and accuracy with which the distinction applies. To perform this service fully must, however, be left to a later chapter. (See chap. xxiii.)

That the law of diminishing returns applies only to land, or at all events applies with some especial force or in some peculiar manner to land, is a conviction appealing strongly to careful thinkers as warranting the distinction between land and other instrumental goods.

It is, for example, clear that Malthus was right in insisting that, as long as the human race must depend upon agriculture for its food,

[4] Etymologically speaking, there are manifest objections to this use of the term "technological" as referring especially to capital regarded in the mechanical and industrial sense; but no better term seems to be at hand.

example, said to be mobile, not spatially alone, but in industrial applications in general. In point of fact, no distinction in this regard, other than of degree, has been anywhere urged or attempted; and evidently any distinction along

so long population cannot continually multiply without somewhere coming upon the harsh pressure of the subsistence limit. And it is true also that this is due to the existing limitation upon the land supply—elastic limits possibly, but none the less real and permanent. Land cannot be harder and harder pushed for product excepting upon terms of less and less generous response.

Postponing for a moment the question of why this is, it is first to be noted that the fact is not only primarily social in significance, but is also a fact the significance of which is purely by forecast or prophecy. While the private and competitive cultivation of land is interested solely in the value of the product, and is interested in the volume of the product only as bearing upon its value, this Malthusian discussion adopts purely a social point of view, regards the food product not as value but as volume, and concerns itself not with the present time, but with later centuries. That is to say, the law of diminishing returns is, for Malthusian purposes, a social law in the dynamics of production, and a law having no concern with value problems or with any distributive problem present or future.

Doubtless, however, the botanical or zoölogical or agricultural facts upon which Malthus based his doctrine in social dynamics may afford a sufficient basis for inferring other laws for present problems of competitive activities and of market values.

Surely there could be no such thing as land rent, were there no limit upon the supply of land; but this is merely to say that all value, whether for land or for machines, or for shoes, or for hats, exists only as dependent upon some degree of scarcity.

And surely, if, with any given piece of land, increased expenditure in non-land directions were not attended with a costantly falling compensation both in volume and in value, there could be no land scarcity and no land value. But this is equally true of mowing machines or horse rakes: so, if one pound of phosphate would suffice to fertilize a continent of land, phosphate would be safe from ever becoming dear in price; or if one hour of labor would do all the work to be done, labor and its products could manifest no rarity.

If the cultivator will apply all his outlays to land only infinitesimally under the margin—that is, to land unlimited, rentless, and valueless—no difficulty will be experienced in getting returns proportionate to outlays; in truth, not in the value sense here but only in the technological sense is land being cultivated; as none is used, none is paid for. But if, with land that is valuable, only the non-land expenses of production are doubled, there must result less than a doubled product: the production undertaking as a whole was not doubled. If this fact is all that is intended to be formulated under the competitive rendering of the law of diminishing returns, the law must be pronounced to be axiomatically valid, but valid equally for capital instruments and for labor agents in all their various combinations. Each case under the

this line must be of a most hazy sort, as applied to distinguish, one from another, land, capital, and labor. It is, indeed, true that capital is commonly declared to possess a mobility far surpassing that of labor or of land; but capi-

law stands as mere illustration of the fact that if only a part of the productive factors are increased, the product will not respond with the same increase as if all the factors were doubled.

But the law is often formulated to assert that if the applications of expense to the land are doubled, but not the land, the extra returns will fail of proportion to the increased expense. And this formulation of the law is also valid, even if not quite axiomatic; proper proportions of land value with other values must be maintained, or the returns will be a disappointment; a bad combination gives bad results.

But this also all holds equally for capital goods and for labor. Too much or too little of any productive factor, relatively to the others, gives bad results. So far, then, nothing has yet presented itself in the field of current, competitive value production to justify any line of distinction between land capital and other capital. And it is now to be added that for most purposes in production, land, labor, and capital may be used as substitutes one for another. Just as the original qualities of the soil may be exhausted by withholding of upkeep, so they may be replaced and renewed by capital expense; the poorest of land may be made into good land, if only sufficient capital expense be applied. And precisely as machinery may take the place of labor, or labor of machinery, so more labor may often be hired rather than more land rented or more machinery purchased; or, again, more capital expense may be applied to a given holding of land rather than more labor hired or more land rented.

This is constantly illustrated in actual farming; one farmer rents more land or better land and thus, through his larger rent outlay, excuses himself from correspondingly large outlays for machinery or fertilizers or labor; another farmer finds it to his advantage to restrict himself in rent outlays and to extend his investment in the direction of capital goods or labor.

But that at the margin this principle of substitution holds, and even that transportation activity or improvements in agricultural technique may have the effect either to increase the land supply or to make more effective the existing supply, does not prove that the principle of substitution is indefinitely applicable at no matter how distant removes from the margin of substitution; for were such the truth, there could be nowhere any disadvantage from an increase of capital expense upon a fixed supply of land, or any loss from twenty laborers working with one loom, or any reason why indefinite wagons should not dispense with the need of horses or drivers.

For it is clear that in the main the relation between the different production goods is one of complementarity and interdependence rather than of the infinite possibility of substitution. More men and more machinery may make call for more land rather than for less, or for the old land at a higher rate of rental. Machinery does not displace men indefinitely, but, under stable conditions of technique, calls instead for men to fashion or to tend; wagons furnish demand for drivers, ships for sailors, horses for drivers, drivers for wagons, and so on without limit.

tal used in this connection points to something distinctly non-technological in nature. Some of this capital manifests its quality of mobility simply because it is unspecialized in application; it is money, demand credits, funds in

Stopping to note, however, that there is in these facts no warrant for the threefold division of productive factors, since it is equally true that bricklayers furnish a demand for hod-carriers, carpenters for masons, wagons for horses, sailors for cooks, engines for cars, rails for ties, meadow land for pasture, and both of these last for timber lands, and so on indefinitely, we return to our postponed question, why does the point always arrive at which nothing serves as a substitute for more land,—a point, that is, at which more and more intensive cultivation gives more and more meager returns? To what particular attribute of land is this to be ascribed? And, for that matter, to what quality or characterisitc of machinery is it due that only so many men can work with one unit of capital goods?

The answer must be shortly given and be left to approve itself: the one attribute of land which finally discourages all attempts at substitution and assures to land its ultimate relation of complementarity, appears to be the spatial attribute, the impossibility of compressing agricultural or building or climatic or scenic aspects of land utility into ever-smaller compass and without limit of disadvantage.

With machinery as related to labor, the spatial fact seems to be sometimes important; but the complementarity more commonly traces to the recurrent necessity, in all machine processes, for the intervention of volition and direction.

In further enforcement of the truth that there is in this common and general fact of complementarity no slightest support for the threefold division of productive factors, it may suffice to recall that a parallel necessity exists for supervisory and directive labor to go with unskilled labor, that many different occupations occupy the complementary relation one to another, and that in a general way each grade of labor is complementary to most other grades.

Despite the consistently private-acquisitive nature of the capital concept adopted by Professor Carver in his *Distribution,* and despite his fundamental thesis that all agent remunerations are received upon the basis and by the measure of their marginal value productivity, he yet finds it possible to distinguish land from capital. The basis of his distinction is technological so far as it is not imposed by certain doctrinal exigencies on the side of costs: and yet the following is from Carver's *Distribution:*

"There are various kinds of labor, of land, and of capital. Two different kinds of labor may be performing functions which differ almost as widely as those performed by labor and capital, or by labor and land. The work of a bookkeeper differs as widely from that of a ditch-digger, as that of a ditch-digger does from that of a steam shovel. Therefore, the same reasons which favor the separation of labor and capital, in order that they be treated as distinct factors, will also favor the separation of one kind of labor from another, or one kind of capital from another, and of one kind of land from another" (p. 85).

general—abstract capital in the accurate sense of the term, mobile, fluid, unspecialized purchasing power—a capital category of surpassing importance, and later to receive most careful examination; other of this capital is such by the fact that, like stocks of goods, it is readily, speedily, and advantageously marketable, and so, private-wise viewed, is easily, through sale, turned into the abstract condition as an intermediate form, and thence into whatever else the private owner may desire.

But evidently, in this last sense of mobility all forms of capital and all wealth of any sort are mobile in different degrees; all—as valuable—are salable on some terms and at some time.

But *as a technological fact,* capital is not characterized beyond land or labor by mobility; it is even questionable whether it is not the most specialized, the least mobile, of the three. Some machinery—indeed, much machinery—is serviceable for only one purpose or in only one line of production, and is only at great, or even at entire loss, to be readapted to another use; and this is true, in varying degrees, of all the different forms and conditions of capital goods, of labor, and of land. Neither mobility nor immobility can be, in this technological sense, regarded as peculiarly a characteristic of any one class of productive agents.

But how about spatial mobility? There is, possibly, a distinction of degree: laborers do migrate, though so tardily as to have given them the traditional stamp of marked immobility. Land is, physically and spatially speaking, of pronounced immobility; capital is mobile in varying degrees accordingly as it has become attached to the land or incorporated with it; improvements in mines or in water-powers are prone to stay where they are originally placed; while, on the other hand, by carting of loam and by grading, by filling of swamps and of water fronts, to say nothing of the action of winds, the seeming fixity of land is appreciably disturbed.

This seeming fact of fixity in land appears, then, to have little in it, otherwise than as a matter of mere extension or superficies; and as to this question of superficies it is fair to say that it is in no sense the point at issue; for, in its aspect of effectiveness for production—its technological significance—land can be worn out, displaced, or renewed, as readily as capital, and sometimes much the more quickly.[5]

There appears to be more in the notion that land presents an especial degree of fixity, or at all events of inelasticity, in supply. And it must be admitted that, in any given state of industrial technique, this fact of relative inelasticity may hold. While it is true that there is today no poor land that capital will not make into good land, that mountains may by capital expense be razed, valleys filled, dry land created out of swamp, or river, or lake, or ocean, it remains true that this is merely a substitution of capital for land, that it is a limited process by reason of the fact that capital is at any time a limited quantity, and that, after all, the opportunities for the profitable application of capital to land are, by the very reason of this deficiency of capital, limited both in quantity and in quality, and, as such, continue to be scarce and valuable.

But in last analysis all this is merely to assert that both

[5] With these spatial qualities of land are more or less closely associated certain legal, jurisdictional, and territorial aspects possessing great social and institutional significance. It is, in truth, a commonplace that the civil law of England, and in large measure the economic, political, and social organizations, trace their origin back to feudalism, a system in which land ownership was the controlling and directing fact for almost all purposes, political and economic, theoretical and practical. The line of cleavage between real property and personal property runs deep through all English jurisprudence.

It would, then, be a most interesting investigation—if only one had the necessary learning—to trace out the manner and degree of connection between the legal distinction of realty from personalty and the economic distinction of land from capital. That the parallelism is more than merely fortuitous may be taken as beyond doubt.

It only remains, then, to inquire whether the common-law distinction between real property and personal property recommends itself as in any way essential or necessary, or can point to other than a purely historical explanation or warrant; Roman law and the derivative systems suffice for testimony to the contrary.

land and capital are similarly limited in quantity, and are thereby scarce and valuable, and that the device of substitution is not indefinitely applicable; if, then, any real distinction is to be established, it must be based upon the fact that with the passing of time, differences of tendency with regard to supply come to characterize land and capital respectively. And it must be admitted that land appears likely, in the long future, to manifest a peculiar degree of inelasticity in supply, of which fact of inelasticity the law of diminishing returns in its ordinary formulation will be a probable expression, and the menace of overpopulation is a sociological inference.

But it must be noted, (1) that all this is matter of prophecy, and (2) that instead of approaching, as is ordinarily assumed, to moral certainty, it is not much better than conjecture. The past three or four hundred years appear to have presented the phenomenon of increasing land-plenty relatively to labor and capital; with the forces of exploration and of developing transportation, new supplies of land have far outrun the increase of population; elasticity has, indeed, in a surpassing degree—probably, it is true, hardly again to be duplicated—characterized the land supply. Capital meanwhile appears not to have increased beyond the expansion of demand afforded by the increase of land supply and the growth of population, since interest appears to have been, in some countries of Europe, as low one hundred and fifty years ago as today, then, with advancing capitalistic opportunities, to have risen, now, with the progressive exhaustion of the new opportunities offered by increasing population and enlarging land supply, to be again falling. Thus, while it seems probable that the future will meet an especial shortage in land supply, this is not at all certain. Food may, for aught we know to the contrary, one day become a laboratory product. "It is . . . . possible that chemistry may some time solve the problem of food production without recourse to agricultural methods. The secret once learned, the

nitrogen in the air of the back yard and the ton of coal in the bin may furnish food for an ordinary family for a year." [6] And it is to be added that in the future, as in the past, much will be accomplished by improving transportation to mitigate, if not to prevent, the conjectural dearth of land.

But, having, for the time being, and in a very broad and general way, accepted, for purposes of retrospect or of prospect, the tenability of the distinction between land and other instrumental goods, we have thereby the more to recognize the difficulty that expanding knowledge,—development in the human factor of production,—or improving transportation—development in both the human and the capital factors—may function technologically as substitute for land. Bettering transportation *is* more land; true, geographically speaking, land is not made, but accessibility is made, and upon an enormous scale: land sufficiency, like land value, is in large measure positional.

But further: if, as technological facts, these probabilities in the dynamic field are taken to justify, for purposes of economic theory, a separate category of land wealth as against other wealth, there is forthwith to be undertaken an indefinitely large task of further classification or of subclassification; for while grain land may be becoming seriously scant, range lands, or champagne lands, or mines, or fisheries may disclose a contrary tendency. So, also, while the provision of wooden implements is becoming increasingly inadequate, the different sorts of machinery and tools of metallic material may be growing progressively cheap; and meanwhile electrical apparatus is likely to abound. And similarly for the human factor; as one quality of man, say the athlete or the unskilled workman, is becoming relatively scarce, doctors of philosophy may more than generously multiply.

Technological classification, then, on the basis of the supply outlook, is a hopeless undertaking. We have even

[6] Davenport, *Outlines of Economic Theory*, p. 324.

come to question whether, technologically speaking, human labor itself is a tenable economic category.

A further argument in support of this threefold classification now requires attention—the retrospective and genetic view, the argument from origins.

Pausing merely to question whether, as bearing upon the classification of the factors of production—a technological problem—questions of origin are logically germane, it is nevertheless to be recognized that the genetic view, whether or not acceptable as a technological view, possesses, for certain purposes, great importance. The only query is whether these purposes are economic in bearing as distinguished from historical or sociological.

Not all wealth was created by man. It need not be here disputed whether capital preceded labor, or the other way about. It looks, truly, as if environment were present as early, at least, as was man. At any rate, there exist unproduced riches; only the presence of man, his needs or desires, and not his productive activity, is necessary to the emergence of some forms of wealth. Utility being a relationship between a human want and an objective (external?) fact, it suffices that both terms of the relationship be present in order that wealth come into being.

Land, then, according to this genetic view, is conceived as the original environmental situation, capital as a human, a labor-produced, addition. It is argued that man, in his reactions upon his environment, has imposed some modifications upon the original situation; and it is urged that such changes in the environment as have not been due to environment itself are properly to be attributed to man; capital is thus conceived as this intermediate term—this aggregate of modifications, so far at least as these modifications have been advantageous.

There is no denying the logical adequacy of this point of view; but from any other point of view than this of logical and schematic accuracy, the distinction will not

serve; it leads nowhere when an attempt is made to apply it. From among all the changes of all the ages, who can assume to tell what environmental changes have been due to environmental processes as against human agencies? What part, for instance, of the fertility or the infertility of the land has been due to its treatment at the hands of man, to his fertilizings, his exhaustings, and his denudings; what part to fostering or wasting winds, to corals, to birds, to bugs, to worms, to microbes? What share of the value of the house traces back to the timber values of the natural forest, and what part to industrial processes? Even with the case of machinery, the typical form of capital, human wisdom would fall far short of distributing the final value between the original ore value as against the labor value, the coal value, and the timber value; nor, for any one of these various shares, would it be possible to determine how far land rents, as expressed in warehouse and transportation charges, have counted in the case. And finally, if anyone could succeed in this allotment of origin-credits, either for the land or for the warehouse, is it to be supposed that, as shares in the total hire of the machine, these remunerations would forthwith, either in the collective or in the competitive reckoning, take on a new relation to the cost of the product or to its value?[7]

[7] Senior was fully aware of all this—as a difficulty—but did not see precisely what to do with it: "It is difficult to point out an article, however simple, that can be exposed to sale without the concurrence, direct or indirect, of many hundred, or, more frequently, of many thousand, different producers, almost every one of whom will be found to have been aided by some monopolized agent. There are few things of which the price seems to consist more exclusively of wages and profits than a watch [MacCulloch's favorite example]; but if we trace it from the mine to the pocket of the purchaser, we shall be struck by the payment of rent . . . . at every stage of its progress. Rent was paid for the privilege of extracting from the mines the metals of which it is composed; for the land which afforded the materials of the ships in which those metals were transported to an English port; for the wharves at which they were landed, and the warehouses where they were exposed for sale; the watchmaker pays a rent for the land covered by his manufactories, and the retailer for that on which his shop is situated. The miner, the shipwright, the housebuilder, and the watchmaker, all use implements formed of materials produced by the same processes as the materials of the watch, and subject also in their

But is there, after all, nothing for theoretical purposes, in any of these technological distinctions, as bearing upon the classification of productive factors? What, for example, does the socialist mean in his demand that all capital be owned by society? Note, however, that he as often insists that all instruments of production be socialized, and in this way of putting it denies, or at least ignores, all distinctions between land wealth and other wealth. The line of distinction is substantially that of the traditional separation of consumption from production goods; land and capital are equally included within production goods and are equally excluded from consumption goods; they are intermediate instrumental goods.

It may as well be said forthwith that this distinction between production goods and consumption goods is serviceful for many purposes: it will be the task of later

different stages to similar payments of rent. . . . . When we speak, therefore, of a class of commodities as produced under circumstances of equal competition, or as the result of labor and abstinence, unassisted by any other appropriated agent, and consider their price as equal to the sum of wages and profits that must be paid for their production, we do not mean to state that any such commodities exist, but that, if they did exist, such would be the laws by which their prices would be regulated. . . . . We may be asked, then, whether the improvements which form the greater part of the value of the soil of every well-cultivated district are all, and forever, to be termed capital; whether the payments received from his tenants by the present owner of a Lincolnshire estate, reclaimed by the Romans from the sea, are to be termed not rent, but profit on the capital which was expended fifteen hundred years ago. The answer is, that for all useful purposes the distinction of profit from rent ceases as soon as the capital, from which a given revenue arises, has become, whether by gift or by inheritance, the property of a person to whose abstinence and exertions it did not owe its creation. The revenue arising from a dock, or a wharf, or a canal, is profit in the hands of the *original constructor.* It is the reward of *his* abstinence in having employed capital for the purposes of production instead of those of enjoyment. But in the hands of his heir it has all the attributes of rent. It is to him the gift of fortune, not the result of a sacrifice. It may be said, indeed, that such a revenue is the reward for the owner's abstinence in not selling the dock or the canal and spending its price in enjoyment. But the same remark applies to every species of transferable property. Every estate may be sold, and the purchase money wasted. If the last basis of classification were adopted, the greater part of what every political economist has termed rent must be called profit."—Senior, *Political Economy,* 6th ed. (London), pp. 112–29, *passim.*

pages not to attack it but, through a more careful reformulation of the productivity concept, to extend it. But meanwhile it is necessary again to point out that, as a technological classification, the distinction holds only as socially viewed. Private interests have little occasion for the distinction; productivity for competitive purposes is quite another thing from technological productivity.

But now, finally, even if it be possible, from the point of view of origins, to establish between land wealth and other wealth distinctions at once theoretically tangible and practicably workable—and even admitting that the technological outlook is so far clear and its problems so far susceptible of present formulation, as to make the distinction one of manifest relevancy to the welfare outlook and of definite significance for the terms of the future situation within which the value and distribution problems must one day be worked out,—admitting, that is to say, that over long intervals of time, in the dynamics of value and of distribution, important tendencies are especially associated with the land category, is it at the same time at all to be admitted that in any current investigation of the process of present value fixation—the value problem in cross-section—these possible or probable outlooks, these long-time prophecies, have any bearing to suggest that, in a competitive society, the productive powers of land are differently remunerated, or bear a relation to costs and to values different from other productive powers and agents? If it were proved, or otherwise accepted, that labor is likely to get more scarce, would this suffice to exclude present-day wage outlays from present-day costs? Some difficult problems with regard to the capital concept and to the basis of interest may be avoided through holding in mind that our problem is the value problem, and that the correct formulation of the capital concept is primarily and chiefly important as bearing on this problem. Laborers may get more numerous and more skilful or less skilful; capital goods may increase

relatively to other productive agents, or possibly decrease; land may get better or worse with climatic or other changes, and relatively to the situation become more or less abundant or more or less adequate; but in each new situation there will be nothing new but the situation and the distributive outcome; the value problem in its setting of new terms will remain in principles, and in methods of analysis, the same problem.[8]

[8] Not only with students, but in economic literature, does this distinction between the static analysis and the dynamic aspects of the conditions under which the static analysis is to be applied, present itself as the occasion of great perplexity. But if for no other reason, the purely problematic quality of these dynamic forecasts should suffice to deny them a controlling influence in value theory. Take it, indeed, as true that during the last few centuries of exploration and of developing transportation, new supplies of land have far outrun the increase of population, that elasticity has especially characterized the land supply; or take the contrary of all this for true; what of it, for purposes of rent as an element then or now in the cost computation? or how does the past trend of the interest rate, or the probable future trend, bear upon the question as to whether interest shall or shall not at any given time rank as an element of cost? By virtue of wars sufficiently grievous and of plagues sufficiently decimating, population may turn toward decrease; would wages then become no part of cost, though now, and for any probable future, they are accepted as properly included? And how, again, if the late tendencies toward a restricted birth rate become still more marked? Will then a new value doctrine have to be recognized, or will it be merely true that the old doctrine will remain valid for a new application under the new setting of the changed conditions?

CHAPTER XI

CAPITAL AS A COMPETITIVE CONCEPT

It is chiefly as bearing upon cost of production in its relation to market values, that the concept of capital becomes of surpassing concern in theoretical economics. And regarded from this point of view, the field of investigation widens surprisingly: What are the relations of capital hire to market prices? Is a tenable distinction to be drawn between these and rent outlays on the one hand, and wage outlays on the other? Or, so far as cost and value purposes are concerned, might not rent or wages be logically extended to cover all forms of remuneration to any sort of productive agent or instrument? In fact, is cost of production an everyday business concept, or is it something peculiar to economic analysis? And if this latter, are capital outlays to be confined only to expenditures for the use of intermediate goods in the time aspect, or are they to include all forms of burden and subtraction imposed upon the capital reserves of the entrepreneur producer in the business process of supplying goods to the market? In sum, may we not, for cost purposes, accept a point of view of capital which regards it solely as the source of expenditure—capital conceived in such fashion that interest payments are to be regarded as paid from it rather than for the use of it, and that rent outlays are as truly burdens upon it—and cost elements under it—as were outlays ever burdens or costs, whether under the later theory, or under the earlier wage-fund capital notion, with its attendant wage-capital cost outlay?

And further: having recognized hires of labor, of land instruments, and of all other instruments as equally cost outlays, must we not likewise go on to recognize, as also of cost relevancy, the question of when these various hire

outlays have to be met, and of the time elapsing between the expenditure and their recoupment by sale?

Not at all denying that, for certain purposes, capital has rightly been and must continue to be discussed as a social category, as production goods, it is intended sharply to raise the question whether this concept of capital has any significance for the cost-of-production analysis or for any purpose connected with the value problem—whether, also, the social concept of capital, the purely industrial and mechanical and non-competitive concept, is not entirely irrelevant to the processes of competitive society and of entrepreneur production, and to the thought and conduct of the actual business world.

It is doubtless true that classical economics contains a considerable number of distinct and antagonistic concepts of cost, but it is none the less true that whenever the argument shifts from the Crusoe discussion to the competitive market, and becomes definite in its analysis and tangible in its applications, the concepts of time cost and pain cost somehow shade off, as we have seen, into some aspect of labor-*value* cost as the basis of employer's outlay; or, as especially with Ricardo, by regarding pain cost as the basis and explanation of the remuneration to the wage-earner and thereby of the wage outlay to the entrepreneur, values are made, through the mechanism of entrepreneur costs, to be proportional to the labor-pain investment in production.

Whether or not labor was thus susceptible of reduction to a common denominator either of pain or of time, and, even if so, whether labor could serve as the ultimate explanation of the very evident market reduction of it to the common denominator of money wages, and whether or not Ricardo's marginal device for getting rent payments out of the category of price-determining costs may in any view be accepted, it remains in any case clear that Ricardo's reckoning of costs is essentially a business man's computation as

a question of money outlays—outlays of the sort which a business man always reckons as demands upon business capital, outlays of the sort which the trading or manufacturing corporation provides for through its subscribed capital or through capital-borrowings upon the market. And it is in this sense, and rightly, but only in this sense, that wages may be spoken of as paid out of capital; but in this sense also raw materials are purchased out of capital—office furniture purchased out of capital; business connections, insurance, and advertising paid for out of capital; in this sense interest and rent are paid out of capital; and so likewise with all other business expenses incurred in the process of getting goods upon the market. This concept of capital is now to be presented as the only concept which can be articulated with the business world's notion of cost of production, and the only concept which, in the development of economic theory or in close economic analysis, can be regarded as having any relevancy to those cost-of-production considerations which have to do with an inquiry into price and value. And again be it repeated that it is chiefly as bearing upon the value problem that the need exists for a re-examination of the capital concept.

Social capital and competitive capital.—Whatever might be the accepted theory of value in a collectivist society—whether a labor theory or a utility theory, or quite as possibly no theory at all and no need of any—it is clear that differences in land as used for productive purposes would receive recognition; per item of product obtained, outlays upon some land would be appreciably lower than upon other land. It is equally clear that some of the product of this society would need be saved as raw material or as tools for further production; but it is not clear that these saved products would be exclusively traceable either to land or to labor; in fact, it is certain that some labor product would get embodied in the land, and that some land product would be traceable in all or nearly all forms of collectivist wealth,

whether of the production or of the consumption type. Probably, however, in any given situation of environmental conditions, distinctions between wealth as land product and wealth as labor product would not, to this collectivist society, be especially interesting,—the problem all the while remaining one of how to get the best results out of the various forms of wealth at hand. If, however, the society were semi-predatory in character, and were making comparison of different habitats to be contested for, it might well find itself at indifference as between one habitat of poor original quality and of medium ameliorations, but with great store of agricultural appliances, as against another of great natural fertility, an inferior measure of land amelioration, and very defective agricultural appliances. So, in the application of its labor power, land at one time, and at another time the tools and appliances of cultivation, might lead in the call for reinforcement. In short, a collectivist society would not need to, and could not if it needed, distribute its productive possessions into land and capital categories.

As this society would be without competitive production and without competitive markets, it would have no need for exchange-value methods or measures. Production would take place according to some sort of utility standard in consumption, and productive agents would be rated in esteem according to their efficiency in utility creation. Land agents and capital agents would stand on a common basis of estimation. The different members of the society being regarded as substantially equal, both production and consumption would necessarily be worked out according to considerations of utility—marginal utility, of a vague and average sort doubtless—instead of, as now, according to exchange values, wherein purchasing power, and not utility (excepting as utility may more or less affect the purchasing disposition), selects the consumers and determines the direction of production.

Under such conditions, what portion of the social posses-

sions would rank as capital, and what would be the the essential meaning of the concept? In accurate analysis, would it be possible to accept the technological notion of capital as comprising all wealth held for purposes of further production—all technologically intermediate products—in the ordinary industrial sense, productive wealth, non-consumption goods? Would the time element count for anything, in other than this industrial-mechanical aspect? Or must all wealth be regarded as capital? How about the ice stored till summer; or the wine aging in the collectivist vaults; or the wheat stored for winter; or the total of consumption goods waiting the time of maximum service in consumption?

It is past question that, especially with capital socially viewed, the earlier notions of capital, like the later, have not merely referred capital to productivity, but have interpreted productivity in the light of technological applications, and as, on the whole or mainly, a technological phenomenon, a category of instruments, tools, and appliances. This test once accepted, and the attempt being at the same time made to articulate it with the test of origins, capital emerged as all non-land forms of instrumental goods. But more and more the especial function of machinery was perceived to be the utilization of the forces and energies of the environment—of "nature." More and more Adam Smith's naïve handicraft view that "no equal quantity of labor employed in manufactures can ever occasion as great a reproduction as in agriculture; in this nature does nothing, man does all," was seen to be misleading. A windmill is merely wealth set where natural forces will achieve, in co-operation with it, or will enable it to achieve, desirable results. But precisely this is the case with the cider maturing to vinegar, or with the wine acquiring age and flavor, or with the sapling reaching up to become a tree; whereat, as we have seen, Ricardo was sorely puzzled, and James Mill blundered into a great joke.

But it has now become clear enough that the techno-

logical concept of capital takes account of only one aspect of capital productivity. That the ice is melting away or the wine falling off in point of gallon measures is not conclusive of the productivity problem. If the utility grows, whether by one sheep growing into two, or one small sheep to one large one, or one poor-mutton sheep to one of good quality, or one superfluous sheep to a famine-time sheep, there is, at least under a collectivist reckoning, economic productivity. So long as either the objective good changes its character so as to change its utility relation to man, or so long as man so changes in needs and desires, or in provisionment, as to modify the utility relation between goods and men, there is room for value productivity. The collectivist definition of capital would then run somewhat as follows: *wealth held for increment—wealth in time.*

However clear, then, for technological purposes, may be the distinction between land wealth and other wealth, the distinction remains mostly valueless for the theoretical economics of a collectivist society.[1]

Capital in the competitive sense.—Examining now somewhat more closely the capital concept as adapted to a competitive society, we ask how far and with what modifications the collectivist capital concept of *wealth as fund,* wealth in time, can be made to serve for competitive purposes. There will come, at all events, this change—that we shall be talking in terms of exchange-value denominators, exchange-value production, exchange value of agents, exchange-value computations of gain, rather than in terms of average service, or of some sort of group-marginal utility. In a general way doubtless, technological produc-

[1] Perhaps it should go without saying that a collectivist society would, for this purpose, have no concern with any question of abstinence, otherwise than as bearing upon the store of goods waiting to be named. Abstinence, so far as it applied at all, would apply to all forms of the society's wealth; and all of the wealth would stand as capital. Abstinence would bear only upon the volume accumulated. But there would, of course, remain questions enough as to the forms and uses into which this store of wealth should be distributed.

tivity in terms of utility product will be paralleled in competitive society by a technological productivity in value product. But not everywhere; for it sometimes falls out, in competitive society, that the short output commands an aggregate sale value higher than the bountiful output; that the spices have to be sunk—mechanical destruction, but value creation—or that monopolistic combinations are formed, to the result of diminished product and higher prices—a plus in value, but a minus in utility.

But none the less, such and so many productive agents, technologically considered, as there are in competitive society will, under the value denominator, rank as capital, whether these be land agents or other; all consumption goods, also, will in strict logic be so included, since all are held because an advantage, an increment, lies with postponed consumption. Even with goods deteriorating or decaying, as objectively considered, the advantage is on the side of delay; it is not conclusive that half the apples stored in the cellar will rot, or that the ice in the shed will lose half its weight before summer.[2]

[2] Up to this point Professor Fetter's views seem to be in the main worthy of acceptance. However, his formulation of capital as *material goods conceived in one aspect, their market value,* does not quite accurately apply, and, indeed, was not intended to apply, to the collectivist economy; market value is not a collectivist category. As applied to competitive society, the formulation appears to be much too narrow, the criticism centering mostly upon the word "material."—See Fetter. *Quarterly Journal of Economics,* November, 1900; May, 1901; November, 1902.

But in his *Principles,* Professor Fetter occasionally manifests small faith in this requirement of materiality: "Capital today may be defined as economic wealth expressed in terms of the general unit of value" (p. 115); a definition wide enough to include immaterial goods privately owned; and on page 129 it is said: "Men seek to convert into marketable capital any increase of income in their wealth or business. . . . . The basis of capital value is income, and whatever be its cause, political or economic, material income can and will be capitalized and added to the capital value of the privilege, wealth, or industry on which the income is conditioned."

But, interpreting this definition given on page 115, it is said: "By this definition, capital at any given moment of time includes all economic goods in existence, when they are thought of in terms of their value. But things have different durations. . . . . Most capital is composed of things durable in a large degree. . . . . The things composing capital are concrete things, scarce forms of wealth."

Perhaps this is all that need be said for capital in a competitive society, so far as there is occasion or justification for a distinctly social concept for capital in a competitive society; and doubtless there are for some purposes both occasion and justification. But for most purposes the social concept does not apply, simply because the activities of men in society are competitively and not socially organized.

But, as a computation of competitive costs, regarded from the point of view of supply-determining influences and as having thereby bearing upon the value adjustments of the market, another and quite different, and even a radically inconsistent, concept of capital demands attention. Actual business computations of the expenses of production include a wide range of expenditures made out of what, in the individual reckoning, stands as the total business investment, and functions in the terminology and reckoning of the business world as business capital. It is, for example, in the sense of Mill's doctrine, this sort of capital that limits labor, this sort of capital out of which wages are paid.[3]

[3] Capital in the technological sense has evident bearing upon the wages of labor, not indeed by determining whether or not labor shall be employed—for this is in ordinary times certain, whatever may be the volume of capital—but by determining the manner and effectiveness of its employment, the productive equipment at its disposal, its *outillage*. It is in this sense only that capital may rightly be said to limit labor and to stand in causal relation to the wages of labor. But this is not the sense in which the term "capital" is used in the wage-fund doctrine; it is there used in the sense of an employment fund, a subdivision of business capital, rather than as a technological quantity; in this business sense of capital, subsistence goods are properly included only to the extent that they are actually a part of the entrepreneurs' holdings; that wage outlays, whether finally expended in subsistence or in other goods, are made out of the cash or banking credits in the employer's control, proves merely that from his point of view this cash or these credits must be regarded as capital. There is little connection, if any, and certainly no direct connection, between the volumes of business capital or credit in society and the real wages of labor. True, any one employer can hire more labor if he controls a larger business capital, but only upon the assumption that competing employers have not a like increase of capital. The old fallacy of reasoning from one to all is well illustrated here. And in any case, it does not follow that having more business capital, an employer can afford to pay, or will for any reason pay, a higher wage rate.

In the computation of competitive entrepreneur costs, that is to say, interest charges are reckoned upon something quite other than technological capital. Entrepreneur capital —capital in the guise in which the type-form of modern business, the corporation, presents it—includes not merely consumption goods in stock, but banking balances, counter money, funds tied up in customers' accounts and in bills receivable of many varieties, corporate stocks and securities, whether held for sale or for investment, and generally all that fund of working capital, more or less unspecialized, requisite for the successful functioning of a business. The manufacturing entrepreneur or the corporation manager would find it a novel and perplexing doctrine which should restrict the capital investment to the buildings, machinery, and raw materials of the undertaking; the corporation really possesses nothing that is not capital.

But it is still true that these non-technological forms of capital deserve not so much greater recognition than they have in the past received, as more careful analysis and classification; for, as has already been pointed out, classical discussion, as indeed all economic discussion, early or modern, is full of this entrepreneur-capital concept.

Adam Smith, for example, rarely failing somewhere to formulate or to employ the correct as well as the incorrect doctrine on almost every economic question, is now and then entirely satisfactory in his treatment of the entrepreneur-capital concept. Perceiving clearly that the fundamental and essential characteristic of capital is found in the acquisitive purpose, the increment purpose, of its holding, and observing that individuals often gain by lending to others or by employing their wealth in some socially non-productive application—on which question of non-productiveness he was notoriously much confused—it all the while remaining true that communities as isolated aggregates can gain only through productive processes of some sort, he divided acquisitive goods into the two categories, social

and private. And out of this, as Boehm-Bawerk believes, has grown up the idea that private capital is connected with interest and is especially a category of distribution, while social capital belongs rather within the field of production.[4]

And doubtless such an idea has developed; but, so far as Adam Smith had any choice between his different idea-vistas, this could hardly have been the doctrine of his preference. For the most part he was talking of private capital as a category of private—that is to say, of competitive—business; not of interest-getting, but of any sort of gain-acquiring through business activities, whether industrial or merchandizing or what not.

It is in this sense of entrepreneur capital that in the Introduction he starts off the wage-fund doctrine on its course with the remark:

> The number of useful and productive laborers, it will hereafter appear, is everywhere in proportion to the quantity of capital stock which is employed in setting them to work, and to the particular way in which it is employed.

So, likewise, in his comparison of corn prices in England, France, and Poland, where he explains that, despite the greater productiveness of agriculture in the more advanced countries, the prices are rarely lower in the more advanced countries, since the superiority of produce commonly not more than balances, and often does not fully balance, the "greater labor and expense bestowed on them," he is employing a competitive, an entrepreneur, concept of cost, in terms of wage payments and of all outlays and disbursements in general. These outlays and disbursements are never made in terms of technological capital, and rarely in terms of laborers' supplies—consumption goods; and for the purposes of Smith's argument, as well as for the entrepreneur's business computation, it does not at all matter in what form or terms the payments are made.

And so again, in chap. vi:

> Over and above what may be sufficient to pay the price of materials and the wages of the workmen, something must be given

[4] *Positive Theory of Capital*, p. 27.

for the profits of the undertaker of the work who hazards his stock in the adventure . . . . the profits of the employer upon the whole stock of labor and materials which he advanced.

No employer, however, can be regarded as advancing a stock of labor in any other sense than that of advancing the wages; Adam Smith is plainly within the concepts of entrepreneur cost and of entrepreneur capital. And again in chap. viii, on "Wages," he explains that labor is rightly treated as a commodity like any other; if capital is increasing faster than population, wages get the benefit; employers fall into sharp competition:

The demand of those who live by wages, it is evident, cannot increase, but in proportion to the increase of the funds which are destined for wages.

Ricardo, as we have seen, found his way over from real value to market value through the mechanism of entrepreneur competition, with its leveling and proportioning effects; all of his reasoning on market value goes upon entrepreneur costs, and thereby, tacitly or in terms, assumes the entrepreneur concept of capital:

Whilst every man is free to employ his capital where he pleases, he will naturally seek for it that employment which is most advantageous; he will naturally be dissatisfied with a profit of 10 per cent. if by removing his capital he can obtain a profit of 15 per cent. . . . . It is perhaps very difficult to trace the steps by which the change is effected; it is probably effected by the manufacturer not absolutely changing his employment, but only lessening the amount of capital he has in that employment. . . . . The monied class . . . . are engaged in no trade, but live on the interest of their money, which is employed in discounting bills or in loans to the more industrious part of the community. The banker, too, employs a large capital on the same object. . . . . There is perhaps no manufacturer, however rich, who limits his business to the extent that his own funds will allow; he has always some portion of this floating capital. When the demand for silks increases, and that for cloth diminishes, the clothier does not remove with his capital to the silk trade, but he dismisses some of the workmen, he discontinues his demand for the loans from bankers and monied men (Ricardo, *Political Economy,* chap. iii, sec. 33).[5]

[5] If further evidence is necessary that prevailingly throughout economic discussion the working concept of capital is the entrepreneur

With the acceptance of this entrepreneur concept of capital—an acceptance not to be avoided so far as the capital category is to retain its significance for cost-of-production purposes—there must evidently go the abandonment of the threefold division of productive factors as essential or important in the value analysis; for while the technological distinctions may and must, to a limited degree and for certain purposes, hold their place, the services of the various factors in value production are, in competitive business, reduced to the common denominator of money price, stand with regard to entrepreneur outlay in an entirely indistinguishable relation, and are paid for as costs out of one common fund of resources, the capital fund of the entrepreneur.

All things, then, that can be traded in, or valued, or rented, or capitalized, may fall within the meaning of the capital concept. In this sense of the term, capital includes, *in the price aspect,* patents, copyrights, trade-marks, business connections, reputation, good-will, privilege, government favor, franchises, royalties, rights of toll and tribute, rents, annuities, mortgage rights, personal claims;[6] and further, it includes monopolies of no matter how various

concept, the citation of authors to the required degree is evidently impracticable here; it remains true, however, that economic literature is full of his concept, particularly in those directions showing the strong influence of John Stuart Mill, practically all of whose cost analysis is of the entrepreneur type. But perhaps it may be sufficient again to point out that the wage-fund doctrine would be outside the pale of possible discussion on any other basis than this of entrepreneur capital. What force is there, on any classical plane of discussion, in calling subsistence goods capital otherwise than from the employers' point of view? Or what force in the distinction between fixed and circulating capital? Or in the doctrine as expounded that labor is limited by capital? At Mill's time it had become no longer possible to be overlooked that society was in a régime of employer production; Mill accepted from the business world the business basis of reckoning—a computation according to competitive entrepreneur costs. Since Mill's time, with the exception of Cairnes's belated and reactionary crusade, there has been practically no systematic cost doctrine that has not sounded in terms of entrepreneur cost, with its implied recognition of the underlying concept of entrepreneur capital.

[6] To deny the term "capital" to these immaterial value items, and to call them merely property, as would (sometimes) Fetter, does indeed

kinds and degrees, so far as they may become the subject of invested cost in obtaining them, so far as they are bought and sold as steps in competitive-productive investment, or are vendible upon the market as capitalized dividend-paying properties. All of these are capital for our present purposes, the value investigation, since they get into costs in the actual competitive market production of such commodities—hats, wheat, machinery, stocks, etc.—as are actually marketed. All things which, from the entrepreneur point of view, appear to be expedient expenditure for the purposes of creating either a commodity or a situation of market value are outlays of capital taking rank as costs of production. When the purchase of machinery is an advisable move in business policy, capital goes into it, as at another time into land or labor; when, in good business policy, a franchise must be had or a patent procured, capital is, in either case, so directed as to accomplish the necessary thing. When, for equally cogent business reasons, legislatures or city councils must be bought, the necessary outlays are, for cost and value purposes, precisely like expenditures for machinery or for the control of patented processes; tramway franchises and sugar-refining tariffs, as situations business-wise obtained by the expenditure of capital, disclose in the current market values of the stock the present worth of the forecasted gains. So the expenses of stifling competition are capital outlays, invested as the costs of a monopoly to be obtained; so also the tribute paid to escape cut-throat competition is a capital cost of production.[7]

That for purposes of competitive production the only important fact for cost is the outlay, and not at all the

obviate any necessity for distinguishing between social and private capital, but the necessity still remains for doing something with this property—a serious matter in itself, or of excluding it from economic consideration—a still more serious matter.

[7] Cf. Veblen, "Modern Business Capital," *The Theory of Business Enterprise,* chap. vi.

direction of it—technological or other—may perhaps be made clearer if we set ourselves to observe the different ways in which different entrepreneurs in the same line of production go about to achieve precisely similar ends. Of six farmers, with substantially similar farms and inheriting or borrowing an equal fund of purchasing power, one will buy more land, another more machinery, a third will hire more labor, a fourth will buy more draft cattle, a fifth will increase his herds, a sixth will enlarge or improve his sheds and barns; but all will, in essential similarity, be devising ways of most gainfully putting product upon the market. True, there would be room enough here, were it to the purpose, for technological distinctions between the various factors of production, but it is clearly not to the purpose; no one of these productive outlays is any more or any less a cost than any other; and no one of them is a cost by virtue of its labor or its pain content, or of its abstinence quality, but only of its capital outlay.

Lest the argument seem to imply too much, or its conclusions to extend too far, it may be permissible again to repeat that no abandonment of the technological concept of capital is advocated or could be admitted to be desirable, but only that this technological concept be accepted as such, and that its distinctly social bearing and significance be recognized. Nor is any attack intended upon the principle that, from the social as well as from the individual point of view, all wealth postponed in consumption is capital. But it is here insistently urged that the category of private capital must not be abandoned, but enlarged to be as wide as the concept of competitive capital; and that this latter concept needs not only recognition, but a markedly increased emphasis as surpassingly important among capital concepts; and all this to the end that economics may preserve some practical relation to the actual business life of a competitive entrepreneur society.[8]

[8] This concept of capital is substantially the same as that which, from another point of view and for entirely different purposes, is set forth by Professor Veblen in his *Theory of Business Enterprise.*

In certain important particulars the foregoing argument and its conclusions are obviously at one with the views of Professors Fetter and Fisher. Social capital one may be content to define in harmony with Professor Fetter's formulation; but there must be sharp dissent from the abandonment of the private-capital concept. Professor Fetter's formulation, while entirely adequate from the social point of view, and important for theoretical doctrines as viewed therefrom, can scarcely be regarded as of theoretical adequacy or of practical service when carried over into the field of existing facts.

Nor does it appear possible to work out anything like approximate coincidence, as does Boehm-Bawerk, between social and private capital, private capital being held as somewhat the more inclusive concept. Fetter and Fisher have sufficiently shown the arbitrary and illogical character of this procedure. Private capital, if there is any such thing, is widely different from a category collateral to and supplementary to the social-capital concept.

But it is not so clear whether, under Professor Fisher's reasonings, there may not be room for the entrepreneur-capital concept above set forth. Certainly the citations from ante-Smith usage, as well as from later usage, admit, if indeed they do not impose, the private business concept; e. g.:

1612: "La sorte principale que è quella quantità di danari, che pongono i mercatanti in sui traffiche."

1694: "Le sorte principal d'une dette."

1611: "Wealth, worth: a stocke, a man's principal or chiefe substance."

1730: "Capital stock [in trade, etc.] is the stock or fund of a trading company, or the sum of money they jointly contribute to be employed in trade." And so, substantially, Rider, 1759; Dyche, 1750; Nicholson, 1818.

1859: "On donne vulgairement ce nom à toute somme amassé, et plus particulièrement à celles qui, placées ou prêtées, peuvent produire intérêt."

1883: "The amount of money or property subscribed or employed in a joint-stock association; the money assets invested in business by a trading firm or individual; the net worth of a party."

The foregoing citations are all from among those collected by Professor Fisher and quoted by him in the *Quarterly Journal of Economics,* May, 1904; which see.

Read with the necessary bias, also, Professor Fisher's formulation is wide enough to admit of the entrepreneur concept: *a stock (of wealth or property, or the value of either) existing at an instant of time, as distinguished from income, which is a flow through a period of time.* But inasmuch as this interpretation would make the formulation do duty for two entirely distinct and inconsistent concepts, it is perhaps not fairly to be claimed or imputed; Professor Fisher's point of view and reasonings are prevailingly social in character. So Professor Tuttle's notion, "surplus wealth as a possession" (*Quarterly Journal of Economics,* November, 1903), appears to be an unwarrantable joinder of social and competitive considerations, or, perhaps better, an impossible compromise between them.

In last analysis, however, the objections to Professor Fisher's view are best appreciated by following out rigorously his distinction between fund and flow, a distinction of unquestionably great value, but made overdecisive for the purposes in hand:

Capital and income being made correlative terms, all flow being income, and the fund giving origin to the flow being capital, wages thereby become a subhead of interest, and men, or their productive power, become capital. Fisher himself accepts this conclusion, but recognizes the awkwardness of it, and declines to regard it as essential to his main position. But it is none the less true that giving up this point necessitates the abandonment of the fund-*vs.*-flow distinction, at all events for the main purpose to which it is applied.

And there is really insuperable difficulty in the way of making men capital, if the capital notion be taken to imply the reduction of the productive good to the value denominator; and this, it will be remembered, is the view for which Professor Fisher has announced himself to stand: "Professor Fetter . . . . seems to think that I restrict the meaning of capital to concrete wealth rather than the value of wealth, and that I do not admit 'services' under income. But these are both prominent theses of mine" (*Quarterly Journal of Economics,* May, 1904, p. 388, note). But it is, then, impossible that men become capital, inasmuch as, while each man does give off successive productive services, which, so far as they are salable—and sold—in advance of their actual rendering, may each obtain, through the process of discount, a present worth, it is not possible to attach a present worth to the whole series in block, that is to the man entire; that the difficulty of giving the successive doses of upkeep expression in present worth is not insurmountable, is seen in the fact that other productive agents, subjected to upkeep expenses, obtain a net present value. The difficulty is that, outside of slavery, no sale is possible, and that thereby there is nobody to do the capitalizing; free men have no market value. Precisely as nothing is property that cannot be owned, so nothing is capital that cannot be capitalized; thus no income can be computed as the flow from any fund, so long as the succession of incomes cannot be funded.

It would, indeed, be possible, as Fisher rightly urges, for each or any individual man to capitalize himself upon the basis of what his future income was expected to offer as gratification balance over and above the stress and burden of acquiring the income. But even this does not meet the difficulty; for if men are to be capitalized in such manner as to permit that the concept of flow—interest—be articulated with the concept of fund—capital—it must, upon such basis, follow that all income, and not some share or balance of income, be taken as the interest fact, and thereupon be subjected to the discount reduction into terms of capital. Otherwise it will immediately become necessary that all rents upon instrumental or other saved wealth be taken to be capital only to the extent that the incomes therefrom afford a net return over and above the burdens and protests of postponement.

Resting upon this view of man as capital, debts and franchises are by Fisher included within the capital concept, as parts of the fund, since they are liens against men, mortgage claims, so to speak, upon the human-capital items. But if it be not permissible to regard men as capital, there is logically no place for *choses in action,* unless upon the acceptance of the private-capital concept—an outcome which both Fetter's and Fisher's views are especially recommended as avoiding.

CHAPTER XII

COMPETITIVE SAVINGS AND SOCIAL CAPITAL: LOAN FUND AND ABSTRACT CAPITAL

We have seen that the cost-of-production and the value problem here has to do not with capital as a social concept but solely with competitive capital, capital as a fund for the payment of the expenses of production, capital conceived in such wise that interest payments are as correctly to be regarded as paid from it as for it, capital, that is to say, as the source of rent, insurance, tax, and advertising outlays, and of all other costs of production as well.

All this follows from the truth that cost of production, as a category in the investigation of market values in a competitive society, is purely a private and competitive fact. Elsewhere it may be our task to elaborate categories of social cost, cost as it would present itself in a collectivist economy, cost in terms of some sort of social labor pain or of displacement of social product,—cost, that is to say, unrelated to private capital and to competitive outlay, and entirely exclusive of all the computations and the detail and the organization of private initiative for private gain.

But for competitive economics, and for cost of production as a step in the investigation of competitive market values, all concepts must be competitive in character; capital must, for cost purposes, be taken as the fund out of which productive expenditures are paid, or as the valued thing or situation or agent into which these capital outlays have been incorporated and value-wise expressed.

It follows, then, that competitive capital will comprise not merely machinery and tools and improvements upon land, but also stocks in trade, and counter money, together with any and all cost-obtained means and agents of private gain, land or other; thus, diverging from the social concept

even at its broadest, competitive capital must include such non-social forms of wealth as debts, franchises, trade-secrets, trade-marks, copyrights, good-will, influence, legislative and administrative favor.

In sum, as has been pointed out at length, the entrepreneur-capital concept abandons, as purely technological and mechanical and as irrelevant to the computations of competitive production, the traditional threefold subdivision of productive factors; it places all productive outlays as upon the same footing relatively to cost and to value, and forsakes all attempt to make capital a subhead under the category of social wealth. Private capital must logically stand as merely another aspect of private wealth.

But it is to be noted that there remains always one fundamental likeness between social capital and competitive capital—the test by virtue of which any good or possession considered from either point of view is entitled to be regarded as capital—the characteristic mark and the essential fact in the capital concept, that of postponed ultimate service. Capital always and everywhere, be it of the social or of the private sort, is a case of wealth held by the owner thereof for the advantage accruing with time.

Saving, then, means postponed service; always and everywhere postponed service is the heart of the capital concept. Privately postponed service is private capital; socially postponed service is social capital.[1]

Thus while, from the social point of view, the distinction between capital goods and land goods might possibly be rested upon either technological or genetic considerations, it is clear that, from the competitive point of view,

[1] It may be objected—a critical friend has indeed objected—that the ideal and unmitigated miser postpones his consumption without purpose of later consumption, and with the distinct purpose of mere accumulation. This must be granted; and it is obviously not a satisfactory disposal of the case to term it abnormal, or to put it aside as mere aberration or disease. But in reality no difficulty is presented for the proposition advanced, which is merely that the satisfaction offered by immediate consumption will not be foregone excepting upon terms of a larger service obtained by way of income due to earning power or through a continued and prolonged enjoyment of some sort.

all questions of derivation and origin and all questions of probable or possible modifications of supply are equally irrelevant as bearing upon the content of the term capital. And likewise the distinction between production and consumption goods takes on, under the private-capital concept, quite a different aspect, if indeed it does not break down altogether. All forms of merchandise must rank as capital; rented pleasure boats serve as basis of acquisition; technological and non-technological goods fall equally within the classification; whatever commands, for the individual, power of disposal over present goods may be the subject of individual saving—of postponed service. Whether this disposal rests upon the ownership of concrete and tangible facts or merely of some right or privilege or claim, is for the purposes of the individual computation entirely irrelevant; productivity for the individual reckoning is in any case implied by the very fact that postponement of service is decided upon; productivity thereby assumes a new aspect; and consumption goods, technological goods, and immaterial goods all take on, in their time aspect, the character of capital, as in one way or another income-bearing, increment-commanding items of ownership.

Viewed in the light of these considerations, some of the confusions, both in earlier and in current capital discussion, come to be readily explicable; the distinction between the social and the competitive concepts has commonly been but vaguely felt and never consistently worked out. Capital, in the sense of a wage-outlay fund, belongs exclusively to the competitive concept; capital as instrumental goods

In ultimate analysis the miser is not indefinitely postponing his enjoyment; instead of this, he is immediately entering upon the preferable alternative enjoyment, the long-time utility-income method.

Likewise it is no part of the argument to insist that the principal sum of an investment must some time be consumed, but only that the immediate total of satisfaction offered by the present utility of wealth will be foregone only on the expectation of a larger total of service through waiting, and that this could fail to be true only upon such conditions as, making abstinence an indifferent thing, must make production a motiveless thing.

falls equally well under either. Capital as distinguished from other instrumental goods—land and natural agents—is a possible social and technological concept; but from the point of view of private capital the distinction vanishes. Credit rights, franchises, patents, good-will, privileges, have no existence in the collective reckoning; but as competitive facts they are among the most important of acquisitive goods. The wage-fund doctrine is nonsense from the point of view of social reasonings; but from the private point of view it is an entirely tenable, though admittedly a not over-important or necessary, concept. Subsistence goods are readily enough regarded as costs and as production items, if only the private instead of the collective standpoint be adopted.

That labor is limited by capital, taken in the sense of technological equipment, is, if rightly interpreted, hardly open to question; but the proposition means nothing or worse if asserted with regard to private capital.

But, for our present purposes, the most significant of the conclusions resulting from this constant and chronic shifting in point of view is in the treatment of savings, loan capital, and commercial credits. Under what concept are we, indeed, proceeding, in our talk about fixed and circulating capital, the great centers of capital, great capital borrowings, the growth of capital, the fluidity and mobility of capital? And what is really the relation between savings and capital?

What, for example, is Ricardo talking of in the following passage, already quoted in part?

> Capital is apportioned precisely, in the requisite abundance and no more, to the production of the different commodities which happen to be in demand. With the rise or fall of prices . . . . capital is either encouraged to enter into, or is warned to depart from, the particular employment in which the variation has taken place. Whilst every man is free to employ his capital where he pleases, he will naturally seek for it that employment which is most advantageous; he will naturally be dissatisfied with a profit of 10 per cent., if by removing his capital he can obtain a profit of

15 per cent. . . . . It is perhaps very difficult to trace the steps by which this change is effected: it is probably effected by a manufacturer not absolutely changing his employment, but only lessening the quantity of capital he has in that employment. In all rich countries there is a number of men forming what is called the monied class; these men are engaged in no trade, but live on the interest of their money, which is employed in discounting bills, or in loans to the more industrious part of the community. The bankers too employ large capital on the same objects. The capital so employed forms a circulating capital of a large amount, and is employed, in larger or smaller proportions, by all the different trades of the country. There is perhaps no manufacturer, however rich, who limits his business to the extent that his own funds will allow: he has always some portion of this floating capital, increasing or diminishing according to the activity of the demand for his commodities. When the demand for silks increases, and that for cloth diminishes, the clothier does not remove with his capital to the silk trade; but he dismisses some of his workmen, he discontinues his demand for loans from bankers and monied men; while the case of the silk manufacturer is the reverse: he wishes to employ more workmen, and thus his motive for borrowing is increased; he borrows more, and thus capital is transferred from one employment to another, without the necessity of a manufacturer discontinuing his usual occupation.[2]

Whence come these sums that Ricardo's manufacturer is borrowing from the moneyed classes? It is a commonplace that capital comes from saving; and it is unfortunately almost as much of a commonplace that savings are *in the same sense capital.* But as we have seen, saving is merely the postponement of the consumable services of private wealth; the people who save, the people whose steady streams of contribution flow into the loan market, are ordinarily merely receivers of income, who, having held their expenditures below their receipts, have something to lend. Their decision to postpone their personal exercise of their rights of consumption is carried into effect, either by the method of holding their purchasing power in hand in the form of money or by transferring this power to other persons by some direct or indirect method of loan. The

[2] Ricardo, *Political Economy,* Gonner's edition, chap. iv, sec. 33.

borrower, whether for purposes of consumption or for purposes of production, desires to obtain disposal over this purchasing power. It is only as a question of security that it at all matters to the lender whether consumption goods or raw material or machinery or land or labor be the purchased fact.

Whether, as the final outcome of individual saving, the productive equipment of society—its technological *outillage*—will be increased, will depend upon the direction in which the borrowed purchasing power is applied. Private saving, by the very fact of non-consumption, ranks as private capital; but the salary or other income saved and lent may never result in either social capital or social wealth; socially considered, the case may sum up as merely one of substituted consumption—as simply a different distribution of the consumable products of industry, which in no way become a part of the social technological equipment.

But by far the larger part of this loan-fund form of savings capital is not thus easy of analysis; it is, nevertheless, essentially of the same character of postponed consumption seeking rental openings. Any owner of any form of private wealth may by the sale of his wealth become the possessor of some of this loan-fund form of capital. By obtaining control of some form of purchasing power, whether money or other, in which is expressed and embodied his deferred right of service, he becomes a fact of supply in the market for loan capital. Commonly by deposit in a bank, his loan-fund capital takes the form of an assignable demand right against the bank.

It is doubtless true that the saving and the lending might possibly enough take place in terms of concrete material wealth, instead of in the form of purchasing power into which this wealth has been converted, were it not for a lack of coincidence between demand and supply similar in principle to that which renders barter so impracticable as a system of exchange. Either the saved wealth may be in the hands of an owner unwilling or unable to grant credit

on any terms whatever, or the credit medium offered may be that of a purchaser not sufficiently well known or not satisfactorily approved; thus, without some credit intermediary or underwriter, the purchaser's medium of payment fails of the requisite degree of market-ability—is not for the purposes of the case in hand *a currency*.

It is precisely at this point that banking methods take on their great importance in furnishing an investment opportunity for savings, and become also a practical necessity for the converting of savings into a fluid and effective loan fund. By the discount of the customer's note at the bank, there is secured for him a medium of payment acceptable to the seller of the property; by the method of check transfer the seller then becomes himself a holder of loan-fund capital, precisely as if the sale had been made for actual cash, and this cash thereupon deposited in bank.

For the purpose of making all this clear and of reinforcing the truth that the existence and the volume of private-savings capital have no necessary connection with the uses to which the borrower devotes the borrowed funds, and no necessary connection with the total volume of existing social wealth, the following illustration will be of service:

Let there be assumed an isolated community of one thousand farmers, nine hundred and ninety-nine of whom possess each one thousand dollars of concrete wealth in farms and implements, at the same time that the thousandth man has for sale $999,000 worth of cattle. If now the capital be sought wherewith to finance the building of a railroad, the project must fail; it is true that there is one wealthy man in the community, a man who would gladly, on approved security, lend $999,000 worth—of cattle. But railroad construction cannot be financed on this basis, unless, indeed, to the extent that the cattle can be made to serve as a form of currency. The difficulty is not that there

is a lack of wealth in the community, but that this wealth is not in practicably lendable form.

But if now these cattle can be sold out on credit among these nine hundred and ninety-nine farmers, their notes taken and discounted into deposit credits; or even if against these farmers there are taken contracts or due-bills or acceptances or orders dischargeable on demand in labor or in produce, there will forthwith exist in this society $999,000 of loan-fund capital of a character suited to the needs of the enterprise in hand.

And if it be objected that this really amounts to the same thing as lending the cattle, only that the method is roundabout and less simple, all this must be admitted, but with the important modification that the other way is, for the purpose of capital-borrowing, an impracticable or even an impossible method; debts must exist, that is, collectible rights in money or in other forms of wealth—for money is for many purposes only a form of credit—must exist, before these credit rights can be lent; and nothing else can practicably be lent.

And there is this still more important modification also: suppose all these cattle to have been, immediately after the sale, swept away by disease; if the debtors are still solvent, the loss is theirs and not that of the capitalist; they are in the aggregate $999,000 poorer, but he is as well off as before, and has not a jot less "capital" to lend. That is to say, the volume of loan fund in a society has no direct or necessary relation—still less, proportion—to the wealth of the society in question. It is true that if these farmers had nothing left to pay with, the debts might be uncollectible and thereby fall out of the lists of capital; but so also might they not, if only it were still true that the laws of the society or its business code of morality made the debts collectible in terms either of commodities or of services. A debt that is secured by character is as good an investment and as truly capital as any other debt, if only it be really as secure.

But this is not the whole doctrine; from the theory and the methods of discount banking, we are to make some further deductions. It is worth noting that Bagehot, in adopting to the full the Ricardian mix-up of the social- with the private-capital concept, declares that capital includes "two unlike sorts of commodities, co-operative things which help labor, and remunerative things which pay for it;"[3] and further still—in full conformity with Ricardo—remarks:

> Suppose the corn trade to become particularly good, there are immediately twice the usual number of corn bills in the bill brokers' cases; and if of the iron trades, then of iron bills. You could almost see the change of capital if you could look into the bill cases at different times.[4]

But note that Bagehot does not make it altogether clear whose is the capital that is changing; but it is perhaps fairly to be assumed that he takes it to be the capital of the lenders.

Cairnes's statement upon this point is hardly more satisfactory; but the loan-fund variety of capital receives equally distinct recognition:

> The existence of a large amount of capital in commercial countries in disposable form, or, to speak less equivocally, in the form of money or other purchasing power, capable of being turned to any purpose required, is a patent and undeniable fact. Nor is it less certain that this capital is constantly seeking the best investments, and rapidly moves towards any branch of industry that happens at the moment to offer special attractions.[5]

[3] *Economic Studies,* 2d ed., p. 55.

[4] Bagehot, *op. cit.,* p. 45.

[5] Cairnes, *Leading Principles,* p. 63.

"Everyone is aware that England has much more immediately disposable and ready cash than any other country. But very few persons are aware how much greater the ready balance—the floating loan fund, which can be lent to anyone for any purpose—is in England than it is anywhere else in the world. A very few figures will show how large the London loan fund is, and how much greater it is than any other. The known deposits—the deposits of banks which publish their accounts—are: in London (December 31, 1872), £120,000,000; in Paris (February 27, 1873), £13,000,000; in New York (February, 1873), £40,000,000; in German Empire (January 31, 1873), £8,000,000; and the unknown deposits—deposits in banks which do not publish their

But the interesting question still remains whether, when the business man has borrowed from a deposit creditor of a bank a share in this loan fund, this borrowed portion becomes a part of the business man's borrowed capital and constitutes an addition thereto. Does the creation of new capital take place with the coming into existence of a new promise to pay? It must be agreed that the new loan has worked no deduction from the capital of the lender; he now holds a note or a right as valuable as was the thing or right with which he parted. But has there been here a new creation of capital, merely by the fact of a larger volume of cash purchasing power? The borrower has by assignment come to hold a demand right against the bank—a right obtained on terms of creating against himself an offsetting and equivalent demand; he has enlarged his cash bills receivable on terms of increasing his time bills payable. If the note signed is a liability, this deposit credit appears to rank for him as a new property acquired to correspond; it is as much an asset as will be any addition to his stock of merchandise purchased through the intermediary of this borrowed deposit credit. In the language of the business world, he has "borrowed capital" for use in his business; the business now employs so much the larger capital total. And yet if this deposit right is really capital, there is necromancy somewhere; the lender also has not diminished his capital holdings, but has simply exchanged debtors.

Something like a similar question arises where a bank customer has had discounted his own note with the bank; has he borrowed a share out of the existing loan fund? If not, is whatever he has borrowed properly to be reckoned

accounts—are in London much greater than those in any other of these cities. The bankers' deposits of London are many times greater than those of any other country."—Bagehot, *Lombard Street,* chap. i, p. 4.

A well-informed estimate in 1895 placed the bank deposits of Great Britain at £700,000,000. In the United States at present the deposit liabilities of the national banks alone run upwards of four and one-half billions of dollars.

capital? Has he increased his capital investment? or his capital utilized in his business? What has really taken place?

Much confusion may be avoided by getting firm grasp of the truth that a bank characteristically does not—practicably speaking, cannot—lend its deposits. Not that the money deposited might not be lent, instead of, as is the more common case, being retained as part of the cash resources of the bank. But even so much as this can be true only where the deposit is in the form of actual money. Conceiving of the bank system as an aggregate, deposits come mostly to be regarded as mere transfers of credit from one branch to another; the clearing system is an effective demonstration of this. In any case, however, deposits in the sense of demandable rights, as distinguished from the thing deposited—customers' accounts, the things which total for so large a part in the aggregate banking liability—are made up of something not within the disposal of the bank to lend, but solely within the disposal of the depositing customer. Commonly, indeed, the deposit liability running against the bank is the outcome of banking accommodations already given; by just so much it is a diminution from the accommodations remaining possible. The lending power derivative from the accommodations already granted is that of the deposit customers. But in any case, from whatever source the deposit liability arises, not it—not the liability, but the deposited money, if there be any, is the only thing lendable by the bank, or usable as reserve basis for further lending. And commonly, as we have seen, no money is deposited, but only an item of account against some other bank—a right of defense against other claims upon which the other bank, debtor in the case in hand, is creditor.

The rationale of borrowing from a bank is, as is familiarly known, quite other than the borrowing of money. True enough, money may be borrowed, but this is unusual and incidental—or accidental—and, so far as it occurs, is

precisely similar to non-bank borrowing; it is no part of that which is peculiar to banking methods and pertinent to banking theory. The transaction of discount and deposit is typically not a lending of cash; it is commonly described as a lending by the bank of its credit, either in the guise of deposit credit, or of bank bills. In exchange for this demand right the customer gives his note which, whether in form a demand or a time obligation, is, in fact, more or less pronouncedly, a time relation. The case has the appearance of a mere interchange of obligations, the customer passing over one which is not generally acceptable as current purchasing power, and receiving one which is so current.

Making no question of the correctness of this view so far as it goes, it is nevertheless to be said that, despite all the machinery and the terminology of the case to the contrary, all that the bank really does is to underwrite the credit of the customer; it lends its own credit, truly, but only in the sense of adding its guarantee to the customer's undertaking to pay.

It therefore follows that the naïve business view of "bank capital" obtained through borrowing misconceives the facts; the process is merely writing over into acceptable purchasing power the business man's own note. The result may obviously be to place the business man in the possession of goods obtained on this underwritten credit; and for present purposes it possibly does not greatly matter whether the man's personal credit is itself called the capital, or whether the pass-book claim, or the demand note against the bank, be regarded as the capital, or whether finally the goods obtained through the expenditure of the purchasing power be regarded as the capital. It remains true that in any case the business man's total investment, in the sense of his net "worth," is not increased.

But whatever the terminology for all this may be and however unclear the merits of the case as matter of terminology, this much comes to stand forth clearly: whatever

else has or has not been increased by the process of discounting a note, the supply of loan funds, the media for the making of exchanges or for the financing of enterprises, the borrowable and lendable and usable current purchasing power of the community, has been increased. The creation and issue of current purchasing power is the chief business of banking institutions. Loan funds—it begins to look as if for some share of these the term capital is of doubtful propriety—are even more intangible and incorporeal than savings capital, since not all of the loan fund has even as much as a *previous* saving behind it; but such as they are, bank-made loan funds must be recognized as intangible and incorporeal facts, a sheer matter of intricacy and complexity in business relations—meshes of obligation—a mere scaffolding of promises—a folding back one upon another of successive layers of credit. And because not necessarily representative of an increase of social capital or even of the liquidated total of private capital, it seems necessary to recognize the loan fund as a distinct economic category.

Some important conclusions now require attention as to the nature of much of what is called circulating capital, and as to the qualities of mobility and fluidity said to be especially characteristic of capital as against land or labor, and finally also as to the interpretation and the limitations to be imposed upon the doctrine of abstract capital and of capital as an abstract fund.

From the social point of view all technological goods and indeed all social wealth have, in varying degrees, the quality of fixedness. But from the private point of view all capital is mobile, since all wealth facts are salable, and since all wealth is capital in the measure and degree of its market price. From the private point of view, therefore, every possession, whether commodity or right, may be the subject of abstinence,[6] and this without reference to the degree of

[6] See note on Senior, p. 137.

its fixedness, when regarded from the point of view of its technological adaptation, or of its quality as a consumption good. Complete mobility for private purposes is, however, achieved only by the transformation of the vendible item of private wealth into the form of money or of other current disposable purchasing power—that is to say, into the very commercial material or medium of which the loan fund is composed.[7]

It should now be possible to estimate how great is the promise of service and how serious the admixture of error presented by the abstract-capital concept.

Looked at from the social point of view, there is no such

[7] Approached in this wise, the differences between Smith and Senior, on the one side, and Ricardo and James Mill upon the other, with regard to the nature and characteristics of circulating and of fixed capital, are seen to be merely differences in the choice of point of view. And here, as commonly, when Smith and Ricardo were clearly and definitely at issue, Smith had the right of the controversy. Smith was advocating the private-competitive point of view, while Ricardo's line of distinction was prevailingly technological.

According to Smith, "Capital employed . . . . in such . . . . things as yield a revenue of profit without changing masters or circulating any farther . . . . may properly be called fixed capital. . . . . Circulating capital . . . . is constantly going . . . . in one shape and returning . . . . in another, and it is only by means of such circulation, or successive exchanges, that it can yield . . . . any profit. . . . . Circulating capital is composed of four parts. . . . . First, of the money by means of which all the other three are circulated and distributed; . . . . of the stocks of provisions in the possession of the butcher, the grazier, etc.; . . . . of the materials whether altogether rude or more or less manufactured; . . . . of the work . . . . made up and completed but still in the hands of . . . . the manufacturer."—*Wealth of Nations*, Book II, chap. i.

So, with Smith, a tailor's needles are fixed capital no matter how short-lived of service. The question is how the wealth is actually handled under the guidance of private interests with reference to the marketing of it—a matter of change of ownership.

With Ricardo the question is one of mechanical and technological durability: "According as capital is rapidly perishable, and requires to be frequently produced, or is of slow consumption, it is classed under the heads of circulating or of fixed capital."—*Political Economy*, chap. i, sec. 4.

Senior sides with Smith: "Mr. Ricardo might well remark that the line of demarcation between the two sorts of capital cannot be accurately drawn; for what can be more vague or more void of positive meaning than such comparative terms as slow and rapid? The singular circumstance is that both he and Mr. [James] Mill should

thing as abstract capital in any other sense than that according to which all social wealth is subject to the value measure and is wealth or capital under this test and measure and expression. And neither from the social nor from any other point of view is there any "spiritual essence" of value hovering over the material forms of capital; nor from the social point of view, or of necessity from the private point of view, is it true that material things perish or wear out, while the capital ghost of them is immortal; there is, in fine, no capital entity as distinct from the capital goods themselves, though there is such a thing as the sum of the values of existing capital goods. This *value or price aspect of the goods* is to be regarded as the attribute or character-

have supposed . . . . that their division followed that of Adam Smith, It is obviously a cross distinction."—Senior, *Political Economy,* 2d ed., pp. 62–73.

John Stuart Mill's use of the two terms hopelessly confuses technological and competitive considerations: "Of the capital engaged in the production of any commodity, there is a part which, having been once used, exists no longer as capital; is no longer capable of rendering service to production, or at least not the same service nor to the same sort of production [a technological distinction]. . . . . In the same division must be placed the portion of capital which is paid as the wages, or consumed as the subsistence of laborers. That part of the capital of the cotton-spinner which he pays away to his work-people, once so paid, exists no longer as *his* capital, or as a *cotton-spinner's* capital. [Italics the present writer's. The money never had any technological quality; the reasoning is purely competitive, bearing on private—entrepreneur—costs.] Such portion of it as the workmen consume [money?] no longer exists as capital at all; . . . . capital which in this manner fulfils the whole of its office in the production in which it is engaged, by a single use [technological aspect and private aspect mixed and confused] is called circulating capital. . . . . This portion of capital requires to be constantly renewed by the sale of the finished product, and when renewed is perpetually parted with in buying materials and paying wages; so that it does its work, not by being kept but by changing hands. [Mixed concept; rests in part upon considerations of durability, in part, of changes of ownership.] Another large portion of capital consists of instruments of production, of a more or less permanent character, which produce their effect not by being parted with but by being kept, and the efficiency of which is not exhausted by a single use." [Mixed concept; rests in part on durability, in part on non-change of ownership.]—Mill, *Principles,* Book I, chap. vi, sec. i.

For proof that this same confusion between the social-technological and the private-acquisitive point of view is equally characteristic of late and current discussion, reference may be had to an article by the present writer published in the *Yale Review* for November, 1905, entitled "Doctrinal Tendencies—Fetter, Flux, Seager, Carver."

istic by which and according to which the goods possess the capital quality.[8]

But from the point of view of private competition and competitive business, the only point of view, be it repeated, which greatly concerns economic theory in general or which at all concerns the cost and value investigation, the question takes on a different aspect; here all capital, by virtue of its quality of vendibility is, in a sense, unspecialized, mobile, and fluid; and all stocks of materials and all intermediate products are, as such, mobile in their varying

[8] *From this social point of view,* therefore, Professor Carver's analysis of the abstract-capital concept leaves nothing to be said: "The effort to distinguish between capital and capital-goods seems to be simply an attempt to distinguish between a quantitative measurement for capital and the capital itself. Things are measured, of course, by selecting a single property which they possess in common, such as number, extension, or specific gravity, and comparing them on the basis of this property. When we want to say how much there is of a certain thing, we express it in terms of the property according to which it is commonly measured. This is true of wealth and capital as of other things. The primitive herdsman, if asked the amount of his wealth, would doubtless have answered an hundred or two hundred head, as the case might be. The primitive agriculturalist, whose wealth consisted of wheat, might have answered in terms of cubic contents, as so many bushels. It is conceivable, though improbable, that both might have united upon specific gravity as the basis of measurement, and have answered in pounds. But the change to specific gravity as the basis of measurement and quantitative expression, would not have changed one bit the nature of their wealth or their capital. Nor would it have made either clearer or less clear the distinction between capital and capital-goods.

"As a matter of fact, value, being the one property common to all forms of wealth, has long since been selected as the property according to which all wealth is to be measured, and in terms of which quantities of wealth are always to be expressed. When asked *how much* wealth they have, men will reply, so many dollars, just as the herdsman would have enumerated his animals. Capital, being a form of wealth, is measured, and its quantity is expressed, in precisely the same way. Does this change in the basis of measurement change in the slightest degree the nature of capital? By no means. When asked how much capital they have, men will express it in dollars; but, if asked in what their capital consists, they will enumerate the instruments. The instruments are the capital, and the amount of value in them is not the capital. . . . . Every distinction which Professor Clark has made between capital and capital-goods can be made with equal clearness and with equal justice between the herdsman's hundred head and the animals composing it, between the farmer's bushels and the wheat which they contain, or between the pounds of wealth on the one hand, and the animals and wheat on the other."—*Quarterly Journal of Economics,* Vol. XV (August, 1901), p. 589.

degrees; and even so-called fixed capitals, technological instrumental goods, are mobile in more or less retarded movement, accordingly as there is or is not a ready market for them.[9]

It is not, however, true that abstract capital at all coincides in volume with the price expression of the aggregate of social capital or of social wealth; the characteristics of abstractness, of homogeneity, of an entire fluidity and mobility, belong to what we have described as the loan fund, and to it solely. Nor is the size of this fund commensurate with the existing fund or total of private capital; the loan fund is merely a portion or subdivision of private capital. Nor, as we have seen, is the loan fund made up of claims resting for their collectibility solely upon some existing form of social wealth or capital; purely personal claims, if they are enforceable, are as truly capital as are rights secured by collateral or by mortgage; many debtors put in pledge their future earning power, precisely as may a state its future revenues. So, also, precisely as the present value of a city corner is the discounted value of the trade privileges which it will in the long future control, so the good-will of a business, and the market value of that good-

[9] The private reckoning being solely concerned with the price aspect of the case, there is, *from this point of view,* in the abstract-capital doctrine, a residuum of truth not quite adequately recognized in Professor Carver's analysis as it continues: "As to the permanence of capital. Does capital abide while capital-goods perish, or is it only the quantitative expression for capital which remains, while capital, the thing measured, perishes? Evidently, the latter. Though animals perish, the amount of the herdsman's wealth, measured numerically and expressed, for example, as an hundred head, may remain. Is it the same wealth? Not unless it is the same hundred head. Though wheat perishes, the amount of the farmer's wealth, measured in cubic contents and expressed, for example, as a thousand bushels, may remain. Is it the same wealth? Not unless it is the same thousand bushels. Though animals and wheat perish, the wealth of both farmer and herdsman, measured on the basis of specific gravity and expressed, for example, as ten thousand pounds, may remain. Is it the same wealth? Not unless it is the same ten thousand pounds. Though goods of all kinds perish, the amount of wealth, measured on the basis of value and expressed in dollars, may remain. Again, is it the same wealth? The things measured, whose quality is expressed in dollars, are evidently not the same; and it is only by confusing the measure for the thing measured that it can be said to be the same wealth."

will, may rest, in large part, on the prospect of business relations some day to be established with human beings not yet born; the situation is none the less a present asset in private capital. The essential and important kernel of truth in the abstract-capital concept is, then, the obscure recognition of the loan-fund fact. Abstract capital is a subhead under the private-capital concept, a competitive and not a social fact, a share and only a share, out of the private-capital aggregate.[10]

[10] That for theoretical as well as for practical purposes there is something at issue here will be evident from the following quotation from an address by Professor Joseph French Johnson, delivered before the Pennsylvania Bankers' Association during the year 1905:

"The rate of interest in the last analysis has no relation whatever to the quantity of gold in the country. It is the product of the demand for and the supply of capital. This word capital is used by the economists to mean all those forms of wealth which are used in production of more wealth; such for example, as machinery and raw materials. It includes all those goods which are not consumed directly, but which are used to produce things which people desire. Among business men and bankers the word has a different meaning. It denotes a loanable fund for use in business, and consists in money and credit in various forms. It is important for us to see that the business men and the economists both have in mind the same thing when they use the word capital. The loanable funds in the possession of banks are all derived from the loanable capital in the country. When the amount of loanable capital increases, the amount of loanable funds increases in a corresponding degree; and there can be no increases of loanable funds brought about in any other way. Banks create nothing. All their lending power is the product of industry. Every deposit of money or credit in a bank represents actual wealth or capital that has been saved in a community. The loanable capital and the loanable funds in a country are practically the same thing; the one a heterogeneous mass of value in the form of various goods; the other the same mass of value made homogeneous by the universal solvent, money."

CHAPTER XIII

THE STANDARD OF DEFERRED PAYMENTS

The purpose of the isolated producer is the production of utility. Precisely the same statement holds, in a competitive society, for the producer under specialization of employments; but all these utility ends are, in this case, worked out through the intermediary of market-value adjustments; from the point of view of the final trade—the consumer's point of view—not valuable things but useful things are of ultimate importance; gain in utility is the sole motive. What one pays less for a thing than he would, if necessary, have paid,—what the thing is good for more than it has cost, the quasi-rent of purchase,—while statable in money, must yet finally resolve itself into goods obtainable through money. Likewise the cost outlay is to the producer ultimately a utility or disutility magnitude rather than a value magnitude. Producers at the margin, like traders at the margin, are such by the fact that the utility in prospect and the utility sacrificed are at balance,—are at a ratio, one to the other, of unit value,—and all this irrespective of how greatly, for the different marginal traders respectively, the absolute magnitudes of the balancing services and sacrifices may diverge—irrespective, that is to say, of whether the marginal case present a ratio of 5 to 5, or of 2 to 2, or of ½ to ½, provided all the while, of course, that even this much of comparability may be assumed between the feeling magnitudes of different men. (See page 300.)

In view of this obvious fact that exchange is ultimately, in individual motive, a problem of comparison between alternatives of utility, that, for either trader in an exchange, the case can have no other significance than this of utility, and that market values are mere price relations—exchange relations—between things of service, that is, between *goods*

subjectively viewed,—the invitation is strong, the temptation great, the promise alluring, for the resolution of market values into a common denominator of utility, and thereby for somehow inferring a determination of value by utility as expressed in terms of this common denominator.

But the attempt is foredoomed to failure. It is one thing to assert, with Say, that utility—desire, want, need—is the basis, through individual bidding, of the whole value phenomenon—the cause, the motive, and the explanation of price offer; but it is quite another and a different thing to assert, as sometimes Say appears almost to do, that all market values can be resolved into this general, homogeneous, underlying utility jelly, or utility denominator. The impossibility of all this was clear enough to Ricardo, though it was not clear just why. He says in a letter to Malthus:

> He [Say] certainly has not a correct notion of what is meant by value when he contends that a commodity is valuable in proportion to its utility. This would be true if buyers only regulated the price of commodities.[1]

But inasmuch as, in Ricardo's view, producers and not buyers regulate price, Ricardo inclines to make value proportional to labor—in the sense of labor pain—failing to see that neither utility for different consumers, nor labor for different producers, can be made homogeneous volumes. But notice once again that Ricardo does not assert the determination of the value of the product by the value of the labor, or even that there is any primary value in labor; he merely asserts the proportionality of value to labor content:

> Our differences are becoming rather verbal than substantial. Your chapter on value has, in my opinion, gained considerably. You misrepresent me, however, on that subject when you say I consider the *value* of labor to determine the value of commodities. I hold, on the contrary, that it is not the value, but *the comparative quantity of labor* necessary to production which regulates the relative value of the commodities produced.[2]

[1] *Letters of David Ricardo to Thomas Robert Malthus, 1810, 1828*, James Bonar, Oxford, 1887, p. 173.

[2] Ricardo to Say, November 9, 1819, p. 165.

Whether Say also may not in some passages be reasonably interpreted to assert more than the mere proportionality of value to utility, and to have attempted to give to value a measurement in some sort of homogeneous utility medium, may not be clear; but he, in terms, asserts only the measurement of utility by value. Thus on December 2, 1815, he writes to Ricardo:

> You accuse me of saying that utility is the measure of value. I thought I had always said that the value that men attach to a thing is the measure of the utility that they find in it.

And on July 19, 1821, with regard to the use of labor as a measure of value, a measure which, as we have seen, Ricardo had, with some misgiving, adopted, as the best at hand, but yet not altogether adequate, Say writes:

> There are multitudes of different qualities of labor; the quantity of each of these qualities cannot be measured. I measure the utility incorporated in the product by the different quantities of another product which one would pay.

But this seems to measure the utility of one thing by the utility of another, or, what is worse yet, by the mere quantity of another, which quantity is but a mere restatement of the sheer market fact of the relation. And Say explains the difficulty that, with gold and iron equal in utility, or even with iron the more useful, volume for volume, the iron has only 1/2000 part of the value of gold,—by saying that 1999/2000 of the iron utility is free goods, a gratuity of nature.

None of this helps much. But it seems fair to say that if value and labor are somehow always in proportion, it must follow, as Ricardo held, that labor may measure value, as it may equally well follow that value may measure labor, and all this irrespective of whether the labor has any primary and non-derivative value of its own; if not, the proposition may be correctly held; it simply awaits explanation of its mystery. Ricardo left the proposition substantially a mystery.[3]

[3] And the socialists mostly accept it as such, and leave it there: "Whenever by an act of exchange we equate as values our different products, by that very act we also equate, as human labor, the different kinds of labor we expended upon them. We are not aware of this; nevertheless we do it. Value, therefore, does not stalk about with a label describing what it is. It is value, rather, that converts every

Likewise, if value—or price—by virtue of the fact that it is the effect of utility, may measure utility, the doctrine ought to work the other way about.

But in point of fact, as should be already clear, neither the labor measure or the utility measure, on the one hand, nor the value measure of utility or of labor, on the other hand, will work, in any other sense than that both labor and goods get, visibly, constantly, obtrusively, a price rendering in the market. Laborers differ in all possible shades of feeling toward labor; labor differs in all possible grades and directions of effectiveness; the only homogeneity is the homogeneity of market value in terms of price. And as widely as men differ in their attitude toward productive effort they differ also in their attitude toward the products

product into a social hieroglyphic. Later on we try to decipher the hieroglyphic, to get behind the secret of our own social products; for to stamp an object of utility as a value is just as much a social product as language. The recent scientific discovery that the products of labor, so far as they are values, are but expressions of the human labor spent in their production, ... by no means dissipates the mist through which the social character of the labor appears to us to be an objective character of the products themselves."—Carl Marx, *Das Capital* (Moore and Aveling trans.), Humboldt Publishing Co., New York, p. 28.

"It is not money that renders commodities commensurable. . . . . It is because all commodities, as values, are realized human labor, and therefore commensurable, that their values can be measured by one and the same special commodity, and the latter be converted into the common measure of their values."—*Ibid.*, p. 41.

"There is, of course, in present conditions, no possible means of arriving at a definite, concrete labor coin, so to say, which shall establish the value of commodities when and as they are produced. The individual labor time it may take to produce a commodity is, as we have seen, no test whatever of the length of social time necessary to produce the same commodity.

"Nevertheless social labor time does measure the value of commodities with reference relatively to one another. How is this done?

"Take the case of weight. What is weight? . . . . . To say that it is ponderosity doesn't help us a bit. Yet we know well enough what weight is by itself. Moreover, we weigh things relatively to their weight in other things. . . . . But what the unit of weight is in the abstract we can no more tell than before we weighed the wheat.

"In chemistry likewise, ... what was the Daltonic atom? Nobody knew and nobody knows. . . . . What is a volume in chemistry? It is just as impossible to say as what is an atom. None the less, though we do not know what they are—any more than we can express in figures $\sqrt{-1}$—volumes serve the purpose of a common measure of the most diverse chemical compounds. So it is with simple, abstract, social human labor."—H. M. Hyndman, *The Economics of Socialism*, London, 1896, pp. 51–53.

of labor; the only homogeneity is that expressed in the price offer. The only utility relation possibly to be expressed by market price is that, for some marginal man or men, competing utilities, of unstable and unknown magnitude, are at balance.

But what has all this to say for the standard of deferred payments? If utilities cannot be reduced to homogeneity, on any basis but that of price—the opaque market fact—it would seem to follow that the problem of deferred payments must be worked out in terms of value rather than in terms of utility. And especially would this appear to be true, in view of the fact that equal market values are incapable of expressing any equality of utility in terms of absolute subjective magnitude, but only in equivalence of control over those external objective goods which are the bearers of utility.

But on the other hand what shall be done with the fact that, carried over into individual interests, values have no meaning but in terms of utility? And after all, value being a ratio of exchange, what does it mean to say that one thing at one time has the same value as another thing at another time? What, indeed, would it mean to say that a certain thing at one time has the same value as the same thing at another time? Or finally what does it mean to say that two things at any given time have the same value?

Value can be expressed only objectively, in terms of something which is, for the time being, taken as the medium or standard of expression. Thus, to say that two things have today the same value might mean very different things accordingly (1) as different men in different bargains should variously choose some one or other particular commodity as standard for the occasion; or (2) as a certain group or congeries of objective goods should somehow—more or less arbitrarily—come to be chosen as a composite standard; or (3) as equivalence should be sought through the intermediary of some conventionally adopted depository of unspecialized purchasing power, a money

standard. It is this last case which actually is meant by equivalence in value in practical affairs; and if, instead of this, a group of commodities were chosen, the group would most reasonably be selected as made up of those commodities into which, for the broad general average of consumers, unspecialized purchasing power gets expended.

The possibility first mentioned is outside the pale of consideration and the second case is a subhead under the first, though somewhat modified to include provision against the probable instability attending any particular commodity as standard, *where intervals of time intervene.* The necessity of providing for this case of time interval is, be it remembered, the problem of the deferred-payment standard.

But possible instability in what? And here we are back at our original question: In value? But this is meaningless, unless translated into command over useful things—goods. And what goods? There is no answer but to choose some group or complex of goods selected in such fashion as to represent a sort of average budget. That a of today equate *in value* against x of next year must require that a hold today to every other good the same exchange relations that x will hold next year.

And so, to say that two different things at one and the same time have the same value is merely to assert their actual equality in exchange power as referred to some selected commodity or complex of commodities—a *price* statement possible only by the temporary or conventional adoption of a standard. And to assert that a certain thing, at one time, has the same value as the same thing at another time, must mean an unchanged control over the same congeries or budget of goods,—practically the same control over some standard of payment, some medium assumed as maintaining—or selected as nearest approximating—an unchanged relation toward such a budget-complex. The same solution would have to be given to the problem of how to compare in value one thing at one time with another

thing at a later time. Equality in price over intervals of time is then intelligible and possible; but equality in value—as distinguished from price—between two commodities would require that one at one time hold precisely the same exchange relation to every other good as that of the other at the other time.[4]

[4] It is worthy of note that in exchange relations between goods of the same time, as distinguished from cases of deferred settlement, it has been urged (for example, by most of the socialists, the Marxians especially) that the price of any commodity expresses that the *value* of it is as much as is *the value* of a certain quantity of the standard; the value of the standard and not the standard itself is thus held to be the essential fact in money, or at all events, the essential fact of its money function. And surely the standard itself cannot, in any other sense than that of its value quantity, be held adapted to serve as a measure of value. How much money shall be paid for a commodity depends, of course, in part upon the value of the commodity, but in part also upon the value of the money.

The better doctrine appears, however, to be that of Laughlin (*Principles of Money,* pp. 14–16): "A standard . . . . is not, and cannot be, synonymous with a measure of value. . . . . This is not what we get by the use of a standard. . . . . The exchange value of gold varies with the number and kind of things priced in it. By pricing an article in gold, the value of that article in relation to other commodities is not thereby 'measured' by gold. In such a case, gold serves only as common denominator, and not as 'a measure of value,' because it does not thereby state the relationship of exchange which that article bears to all other exchangeable goods. All that is obtained is the exchange ratio between gold and that particular commodity. . . . . Moreover, there could, of course, be no absolute standard for 'measuring' value, since any one article, chosen as standard, would itself vary in value; consequently the values of other goods would be compared with a standard itself constantly varying. Not infrequently one hears of an argument in favor of gold as a standard that it is as 'invariable as a yardstick.' This statement contains the fallacy of supposing that exchange value is as absolute as linear length, when it is only a relation of one article to another expressed quantitatively." (But see, contra, Carver, *Quarterly Journal of Economics,* May, 1907.)

But however all this may be, it is evident that in deferred-payment relations, merely a given amount of money is stipulated; the amount of value actually to be received cannot be stipulated, but must necessarily depend upon the amount of value which, at the time of payment, may happen to be contained in the amount of money paid. The measure function of money is clearly not here; a future unknown value cannot be a value expression of the value of other things.

But whether, if at all, in current exchanges, and if so in what sense, money may be regarded as a measure of value is a problem of far greater perplexity.

It has mostly gone by common acceptance that in order that goods exchange against each other they must be possessed of some common quality by virtue of which they may be related to each other for the

But after all, why bother, even for theoretical purposes, with this budget matter? If the standard requires either justification or rectification by the test of the budget, what shall then serve to justify the budget? There can be nothing for this but the attempt to obtain an average and approximate equality of service through the construction of a budget made up of a widely selected and carefully proportioned variety of consumption goods. Indemnity to the borrower for utilities parted with must be found in an

purposes of the exchange process: thus Marx, finding, as he thought, that utility could not be this common quality, forthwith inferred that labor cost must be the quality sought.

Recalling that only the two facts, utility and scarcity, must concur for the emergence of value, and that scarcity is essential only because solely on terms of it can all items of a stock possess utility, and recalling also that some articles have scarcity and value irrespective of labor cost and independent of it, it has seemed to follow that utility is that common quality by virtue of which different goods come to be comparable in their appeal to human choice.

But that goods appeal to the individual only through their utility to him does not imply the existence of some one aspect or quality of utility common to all articles of value; there are, indeed, no value facts affording equal utility to all individuals, none that are constant at all times in their service to any one individual, and none even that at all times are serviceable to the same individual in even the slightest degree.

But it none the less remains true that for the emergence of value the supply of any good must manifest some degree of scarcity relative to the desire for it; otherwise there can be nowhere an individual with reference to whom the stock can establish a marginal significance by virtue of which it may impose upon that individual a sacrifice in purchase cost or in productive outlay.

Thus the possession of marginal utility—but all the while as dependent upon this relative scarcity—is sufficient for the existence of market value. But this utility is in no sense a social or a common or an objective utility, but is in every case purely a relation between the good in question and the desires of an individual. The only fact both constant and objective in the market-value phenomenon is that of commanding a price, money or other—that is, of possessing exchange power.

But does this fact of exchange power, expressed as command over some *quid pro quo,* imply in any sense, in either of the articles exchanged, the possession of the measure function?

In a certain sense, doubtless, any comparison by an individual of the utility to him of different items of goods implies a process of mental measurement; and it must be admitted that a comparison of utility with utility is the very process and the only process through which the individual trader arrives at the disposition to trade. But in this trader's barter activity there is rarely for him an equality of utility between the thing received and the thing parted with, never, indeed, an equality

equally important aggregate of utilities returned. Here, as everywhere in the individual reckoning, money is an intermediate between utility quantities and not between value quantities.

It is possible that a change in point of view may aid in the solution of this not oversimple and very important problem.

Suppose the only products in society to be hats and

excepting in his marginal trade or in the case of the marginal trader; and there is never in any case, marginal or other, any necessity or occasion for the measure function or calculation, otherwise than to the degree and in the sense that measure is implied in the mere fact of comparison and choice,—a sort of mutual measuring of either commodity by the other.

Nor is the difficulty with the existence of a market-value measure that utility may not be the measure of utility, if only the utility to different persons were the same utility, a common and objective reality. It is, in truth, the very essential of a measure that it possess in itself the quality it is to measure in other things. Only something of length can measure length; only something of weight can measure weight. And the choice of a measure is necessarily arbitrary; to express any dimension of any given body is possible only in terms of relativity and only by reporting it as such a part or such a multiple of the dimension of some other body. So many pounds of weight is merely so many times the weight of another chosen body, taken at a certain purity, under prescribed conditions of temperature and of altitude.

Nor, seemingly, is Professor Laughlin correct in insisting that the psychological necessities of the measure function prescribe that the measure fact be a fixed and definite and unchangeable fact, but is only correct in the implied insistence that, so far as the measure falls short of this test, it so far loses its serviceability for the purposes in hand, and must rank as a defective measure; the quantity of utility or of value fails of receiving accurate statement and definition in the purported measure. So, whatever the objective fact may be with regard to the precise invariability of the accepted measure, it is fairly clear that, *thought of* as a seriously variable measure, the measure thereby ceases to be a practicable measure. No one thing of utility or of value can, then, ever, *market-wise*, by its quantum, serviceably and adequately express the utility or value quantum of another thing; the first thing, the purported-measure thing, has no stable quantum of its own, but is, by its very nature, constantly varying; thus it is, by this very fact, not a practicable measure.

But there is a difficulty in the case which is decisive against the presence of any measure function, good or bad: All measurement whether vague or precise, is a quantitative comparison; the standard must, then, contain a quantum of some certain quality or magnitude, which certain quality or magnitude must in some degree be present in the thing to be measured. To the individual, therefore, it is not impossible that either item in a transaction of barter express in terms of its

shoes, and that it somehow comes about that for each item of either kind of goods today there are tomorrow two items of goods: what does it mean to say that values have increased and that thus there is room for the emergence of interest? Goods have increased, utility has increased, goods having value have increased; one hat will not buy more shoes than one hat would buy yesterday, but two hats will buy more than the one hat of yesterday would buy. There-

utility, more or less accurately, the utility of the other item. But not so with market value; here nothing is asserted or implied as to any general or objective utility, nor can the mere brute fact of exchange parity import a parity of utility for traders in general or any sort of market-utility calculus or parity. Utility to whom? *Market* utility parities or calculations are, indeed, *ex vi termini,* sheer absurdities.

The case is bad enough with any attempt to set up a market-price or market-value measure of utility; it is still worse with any attempt at the market-value measure of market value. The difficulty here is that value, in this market sense, fails in the requirement fundamental to the notion of measurement, namely, that a measure must be quantitative and must measure things of quantity. But market value is neither a magnitude nor a quantity, but only a ratio. True, a ratio can be restated as a fraction—½ or ⅓ or ⅞ of unity—but it becomes quantitative only in becoming concrete, as ½ or ⅓ or ⅞ *of something.* Thus, that the exchange ratio between hats and shoes is, say, 2 to 1, offers no possibility of giving quantitative expression to the exchange ratios of horses and wheat to each other or to anything else. Nor does the selection of a conventional price commodity avoid the difficulty in any other sense than that it makes possible of comparison the ratio of horses to gold with the ratio of hats to gold—all to the conclusion that while horses stand to dollars as 100 to 1, hats stand to dollars as 1 to 1. This expresses merely the two different exchange ratios held by the respective commodities to gold—asserts, that is, two different powers of command over gold, and then declares that one power is one hundred times as great as the other. But merely as different ratios to gold no measure is disclosed: (1) the value of gold is itself possible of expression not as a ratio of exchange to commodities in general, for there is no such exchange possible and no ratio for its expression, but only as one or another out of countless different possible ratios. (2) This same ratio of 100 to 1 between horses and hats is equally valid to express the ratios of countless other pairs of commodities relative to gold, e. g., pianos to kitchen tables, houses to sewing-machines, shoes to laces. The ratios of things to one another in Brobdignag were the same ratios as in Lilliput. The real difficulty is again that all these various ratios to gold are mere ratios of exchange, and are comparable simply and only with this significance and as entirely lacking in any ultimate basis or content. In this respect the case differs from true measure ratios of weight or length. With weight the reference is to the quantitative objective reality of pressure or stress—with length, to the objective quantitative fact of extension. With the value ratio, however, there is nothing but the ratio.

fore, measured in shoes, the hats, having increased in number, have more value. But this is to accept shoes as a standard. Shoes likewise, since they have increased in volume, can be shown to have proportionately increased in value, if only hats be accepted as the standard: as why should they not? But, on the other hand, why should they? Are either hats or shoes invariable in any quality important to value, and, if so, in what quality? There is no quality other than utility that can have claim to consideration. But with these expansions of supply, the utility quantity has fallen, per item of supply. Value can in this case mean nothing but the ratio of exchange between hats and shoes, and this ratio has not changed. How talk about an increase in the total of exchange ratios? By just so much as some things gain in value others must lose; and those that gain, gain only as stated in terms of others. It follows therefore that to return an equal sum of values means nothing, unless it be merely a poor way of expressing the return of an unchanged quantity of utility.

But equality of utility is not a relation capable of expression in terms of value, either for contemporaneous exchange or for exchange over intervals of time or space. And inasmuch as utility is purely a fact of the individual psychology, it is not susceptible of quantitative objective expression of any sort. Thus the return of an equal sum of utilities can be achieved only so far as this is possible—and in the sense that it is possible—through the adoption of some conventional standard or medium. True, price is a special case of value; and thus to resort to price in arriving at equality of utility is, in this sense and so far forth, a value process. But that gold, like any other commodity, obtains its exchange standing through market-value adjustments, and must, as exchange power, itself express a value relation, proves simply that resort is being had to one sort of value fact—and this a special and peculiar case—as mere intermediate to the most expedient solution of a pure utility problem. But no *value* equality is

possible in the case, and even were one possible, it would be irrelevant.

Appeal to the fundamental principle that all saving is merely postponed consumption enforces the conclusion that the payment of a loan should be made upon the principle of indemnity, that is, should be the return of rights of consumption of equal importance with those parted with, which is merely another way of saying that the standard of deferred payments is ultimately a problem in utility rather than in value.

Or the argument may be put in another way:

> All cases of mortgages, notes and bonds, bank deposits, and credits in general are protracted instances of exchange. The wholesaler sells his groceries at three months time. Instead of receiving his pay immediately in commodities, or in money with which to buy commodities, the payment side of the trade is postponed for a term of months. . . . . When you lend money you really sell the right to things; when you are repaid, you get things in return. Thus a loan is, in essence, a long-time barter. When you have sold your hats, and allow X to take the money for which they sell, it is the same as if you had sold X the hats, or the goods which he buys with the money. When he pays you, he really returns to you remuneration for the hats. If the payment is a fair one, the money which he pays you must not have gained or lost in its control over the means of satisfying human wants.[5]

Clearly, also, this utility indemnity can rarely, if ever, be attained through a return of goods specifically like in kind and volume to the earlier sum. It again becomes evident, then, that to the extent that the equality is attainable at all, the payment will have to be required in terms of general purchasing power, and this according to some standard, conventional or occasional. And while the payment for earlier money by later money is the return of a thing of value in payment for another thing of value, and, in this sense therefore, is a transaction in values, and while it must be admitted that any equality in utility can, in any particular case, be only approximate, it is still true that no

[5] Davenport, *op. cit.*, sec. 170.

assertion of an equality in values is in any way possible, since the different money sums are rarely, if ever, exchanged against the same sorts of goods; and even were they so exchanged, the same bulk, number, weight, or other measure of concrete commodities is, with varying times, a very different and changing fact in its aspect of service,—not, be it noted, to human needs in general—which would be a strong enough case, but rather to the particular needs of the specific human being under consideration.[6]

Thus—forestalling a little the interest problem—there is, restated as a problem worked out in terms of money, no great difficulty in explaining why, with the more goods existing by the aid of capital, a higher price should be obtainable therefor, and thereby a money premium be chargeable and payable. But at what rate? And it should

[6] A possible difficulty here requires to be provided for—the modifications which changes in standards of living impose upon the principle of utility indemnity, in the mere sense of objectively equivalent goods. "With increasing effectiveness of labor, human needs have expanded. That which was once relative comfort has become privation—privation absolutely in view of higher standards of desire—privation relatively in view of higher levels of comfort or luxury in society. The causes which have served to make greater consumption possible have themselves made greater consumption necessary. Payment in an equal amount of control over the objects of human desire is not an adequate return for the earlier sacrifice. If even exchange of work would be overpayment, even exchange of utility would be underpayment. . . . . That the creditor receive a volume of commodities—services included—merely equal to the volume lent, would be enough, were the creditor substantially the same creditor in needs and requirements—if, for example, the advance in labor effectiveness had taken place in a night, immediately after the loan was made and its proceeds consumed. By this very measure of usefulness, payment must be made in something more than an equivalent command over commodities. The increased effectiveness of labor has brought about a higher level of consumption—a raised standard of comfort and of life. . . . . The line, then, of compensation—of equality in sacrifice—must be found somewhere above equality in purchasing power, somewhere below equality in command over human effort. Something must be added to payment on account of the greater necessities of the lender; something also on account of greater requirements for the maintenance of social position and relative well-being. The point of fair adjustment is to be found where the direct gain from larger satisfactions is offset by the disadvantage of increased requirements and decreased command over social distinction." —Davenport, *op. cit.*, sec. 165.

now be clear that interest also is not a problem of value or of value surplus but rather of price and of price surplus.[7]

[7] It is perhaps worth while, as illustrative of the general trend of discussion with regard to the standard of deferred payments, to note that Mr. C. M. Walsh, in his brilliant discussion in *The Fundamental Problem of Monetary Science,* proceeds altogether upon the assumption that the problem cannot be other than one of value; takes this as so far axiomatic as to require no proof, and devotes himself entirely to the attempt to decide which form or concept of value—cost value, esteem value, or exchange value—is best adapted to the needs of the problem.

As early as upon page 1 he sets forth that "that is the best money which approaches nearest to being stable in value." Any variety of utility standard is foreclosed from consideration by the easy dictum that "the idea of use value is of course to be left out of the discussion"—page 11—and it thereupon gets left out. Then, having ably and convincingly driven the labor-cost standard from the field, and having also, to his own satisfaction, disposed of esteem value—probably meaning thereby *subjective value* in the Austrian sense—he finds that exchange value, being the only thing left, affords the only possible standard of deferred payments. Just how, finally, the desired equality in exchange power between loan and payment could be ascertained or proved is not, at least to the present writer, made fully manifest.

CHAPTER XIV

INTEREST

While, as has already been argued, and as will later be further argued, interest has its basis in the advantages attaching to present goods over future goods, it is nevertheless to be defined, in a competitive economy, as *the premium which present purchasing power, as money or in terms of money, commands over future purchasing power in terms of money.*

But why does this premium exist? Is it at all due to the technological productivity which present wealth, in form of instrumental goods, manifests with passing time? Or does interest merely express the fact that some men find it to their advantage, or at least to their choice, to promise, against 100 dollars of command over present consumption rights, the payment at the end of a given term of 105 dollars of this purchasing power? And what bearing upon the rate of premium has the common preference for using purchasing power for purposes of immediate consumption—the common indisposition to postpone consumption—to save? And how about those people who, in their rational or irrational solicitude for the future, would save even without any money agio—persons to whom some forecasted change of need is a sufficient present inducement and premium upon saving, if indeed, any premium of any sort is needed in their case?

And what is the precise relation of technological productivity to the problem? After all, is not the entire interest relation one between present consumption goods, or rights to consumption goods, as over against future consumption goods, or rights to consumption goods? The rate of agio, or of discount, having been established in the consumption-goods market, have

these technological considerations more to do with the case than this, that such technological methods and processes as promise a productive agio sufficient to overbalance the market discount to which the future product is to be subjected in getting a present worth, are found practicable of undertaking? Or put it as follows: the abstinence protest being such in society that 105 units of purchasing power, expressed in the conventional standard, due a year hence, exchange today against only 100 such units for today's use —has technological productivity any other relation to the case than this, that such technological uses as can promise 105 a year from today on account of the 100 now, are feasible of undertaking? And what of the 100 that can regularly and recurrently transform itself yearly into 110? Must it not, by this very fact, be said to be not 100 but 200, if, of course, this 10 agio is to be imputed to it rather than to the management of it? That is to say, are not all rentals and all rent-bearers capitalized into a present worth upon the basis of a discount rate which is obtained without reference to them?

Land recurrently pays a rent; machinery also commands a hire: are these hires mere rents or are they time-discount facts? If 100 of land rent is due a year from now, this rent has a present worth of 95+. And likewise if machinery belonging to me, or a mortgage now running in my favor, will bring 100 a year hence, this 100 suffers a discount to 95+ in the process of getting over into a present worth. If this 100 were itself interest upon an invested principal sum of 2,000, shall not the 5 of interest be taken to show that this time-discount rate is itself based upon some underlying time-discount rate? That is to say, if all rents and hires themselves are subject to the principle of time discount, what becomes of these rents and hires as themselves the explanation of the phenomenon of time discount? Can this discount fact be taken as a mere result of the fact that all machines and farms worth 2,000 each are earning 100 each? Or is it not rather true that if they each earn 100 annually,

we therefore call them each worth 2,000? And why is this the case? Whence is derived this rate of 5 by which to do this capitalizing? For if the 5 per cent. rate is derived from the fact that the 2,000 earned 100, it will not do to invoke, in the same breath, this rate in order to explain that the rented fact has 2,000 of value.

Proof that all instruments earn rentals for time use will perhaps suffice to prove value productivity; but will it also suffice or contribute to explain interest? Or is time discount rather a phenomenon belonging exclusively to consumption goods or to purchasing power in the time aspect—which time discount is then applied to place a present worth upon each recurring rent payment separately, and to make possible a capital value as the sum of the present worths of a series of rents?

It is not uncommonly said that each productive agent, labor, for example, is paid according to its value productivity. But if the laborer is paid before his product is marketable, the wage received must be lower by the measure of the time discount. And it is likewise said of capital that its remuneration is the equivalent of the value productivity of the capital. But why is the total value of the capital scaled down to correspond to the *present worth* of its future returns?

Or to put the problem in still another way—for every possible device must be invoked to the end of getting this most elusive of problems adequately stated: All that the distributive outcome of production can ever show is that, out of the aggregate production, 105 is to be imputed to capital where only 100 of capital originally went in; why was the capital that was going in, and that was to emerge as this 105 of result, worth only 100 in the beginning? Why not originally worth 105?

But 100 what? And 105 what? Are these anything but dollars, or purchasing power in terms of dollars as the standard? Is interest anything more than a standard differential due to the rents which instrumental goods,

appraised in money, afford in money, and to premiums which present purchasing power or present money commands, for consumption purposes, over future purchasing power expressed in terms of the standard?

And is there, after all, any problem of surplus *value* with relation to interest, any more than, with the question of the standard of deferred payments, there was found to be a problem of equality in value? Is it possible to say, because there is a physical net return upon instrumental goods, that there therefore is or is not an increase of value or a net return of value? The increased weight-and-tale total of goods may sell for less as well as for more money; but even in the case of an admitted increase capable of being established as a physical net return attributable to a particular and isolated instrument good—a case, we will assume, of a cow worth at the beginning of the year $100 and represented at the end of the year by the same cow in equally good condition, and, together with her, a net gain of $5 worth of calf; even in this simplest of cases is it possible to say that there has been any increase of *value?* The 105 dollars will not, ordinarily, indeed, cannot, be used to purchase the same things; some of the goods which would have been bought and consumed by some one or other, had the cow been sold or killed, its price spent, and its *quid pro quo* consumed, have risen in price and some have fallen, some are no longer in the market, the while that others, before entirely unknown, have appeared in the market; and in any case, the utilities attached to the same objective goods cannot be the same utilities; men change, seasons change, temperature changes, food requirements change, fashions change. Is the *more* of the 105 an increase in point of value, or rather is it merely and purely a question of change in the aggregate of service, a comparison of the total of utility commanded by the 105 of standard as against the earlier 100 of standard? Is interest truly a value problem in any other sense than that, by the process of discount, different and otherwise incomparable utility

volumes are brought into relation for one and the same time?[1]

But even if all this is satisfactorily answered, there will remain the difficulty of tracing out the process of determination of this rate of discount, and of deciding precisely what parts, relatively to each other, technological productivity and psychological time preference have in the determination.

Again, have we here a problem of present *goods* against future *goods,* or rather only a problem in the field of abstract capital, of the loan fund, an investigation of the relation of a quantum of the standard, or of purchasing power in terms of the standard, at one time, as against a quantum of standard at another time—the problem of how much of standard a year hence equates against 100 of standard of today? and then, why?

If the solution is, indeed, along this last line, it is perhaps easy to see why, with a premium offered by different borrowers for the present standard for consumption

[1] But we may well stop to ask what all this, when resolved, will have to do with the present status and the development of the argument.

As a cost-of-production computation, in the competitive reckoning, all hires of productive instruments and all interest charges of any sort must be included in the computation. That is to say, cost includes wages, rent of land, all rents of all other instruments, and also the interest-discount charge due upon the time employment of entrepreneur capital.

The value problem, upon the cost-of-production level of analysis, cannot do otherwise than to accept the discount rate as a datum, an underlying and definitive fact requiring no examination, precisely as the cost-of-production analysis accepts without question and takes for granted all value hires and value rentals upon instrumental or agent facts. *On this level* we have no concern with the theory of interest; it is only when we come to the examination of the *determinants* of entrepreneur cost—to the situation facts—and to a discussion of the distributive process, and to an examination of the fixation of the distributive shares, that the problem of interest is logically before us.

But practically speaking, in the exigencies of exposition, it has seemed necessary to treat the problem of interest here, in order to determine what interest payments really are, and upon what sort of capital they are computed, and to justify their inclusion *as they are* in costs; and then finally to get out of our path all other associated questions of the ultimate basis of interest and of the process of its determination.

purposes, and other premiums offered by different entrepreneurs for the wherewithal to acquire present instrumental goods, and with varying dispositions on the part of savers to save, and of possessors of wealth to abstain from its consumption, and with varying dispositions on the part of owners of wealth to exploit their own possessions, there should result, through the value mechanism of the market, a ratio of exchange, a discount rate, between the standard as a present fact and the standard as a future fact.

But now, assuming that for the time we have questions enough and possible solutions enough before us, it may somewhat illuminate the problem, as well as somewhat further the solution, the while, however, possibly raising more questions, if we turn to examine for a little the details of the treatment of the problem by several of those authors who appear best to have appreciated its difficulty, and who have most contributed to its solution.

Boehm-Bawerk's explanation of interest rests in part upon the technological productivity of capital and in part upon the principle of perspective in consumption—this latter expressing the preference commonly, though not always, felt for the present good as consumable item, over against the future good—his definition of interest running "a difference in value between present and future goods in favor of the former." [2]

That "perspective" means merely the indisposition to postpone consumption, and is thus the same thing, under another name, as abstinence, would perhaps not be admitted by Boehm-Bawerk; this would sound too much like a cost view—whether pain cost or some other type of cost—and thus would not fit well into the demand-utility point of view in the explanation of value. In the main, however, Boehm-Bawerk's emphasis is upon productivity, perhaps because the "perspective" doctrine has, under its aspect of abstinence, been already sufficiently emphasized.

[2] *Positive Theory of Capital*, p. 273.

But, according to Boehm-Bawerk, all sorts of errors have associated themselves with this principle of productivity. One hundred dollars' worth of capital, or one hundred dollars' worth of labor, must be accounted productive even though productive of only fifty dollars worth of product. Smart has thus summarized this particular aspect of the argument:

> Capital would still be productive though it produced no interest, e. g., if it increased the supply of commodities the price of which fell in inverse ratio. . . . . The [productivity] theory . . . . does not explain why capital employed in production regularly increases to a value greater than itself. . . . . The theory that explains interest must explain surplus value. . . . . Labor by no means always produces more value than it consumes. But the plausibility of the productivity theory is the parallelism it assumes between labor and capital, the suggestion that interest is wages for capital's work. But . . . . value cannot come from production. Neither capital nor labor can produce it. . . . . What labor does is to produce a quantity of commodities, and what capital co-operating with labor usually does is to increase that quantity. [And the value may or may not be more.] How . . . . can it be that capital employed in production not only reproduces its own value, but produces a value greater than itself?[3]

Boehm-Bawerk accepts the distinction between land instruments and non-land instruments, and rules out these former, together with consumption goods, from the capital category: "Objects of immediate consumption . . . . and land, as not produced, stand outside our conception of capital. It does not fall within our province to go into the theory of land rent."[4]

Certainly the principle of "perspective"—of abstinence—does not apply to land instruments directly, since they are not consumption goods: but this would apply equally well to cut out most other instrumental goods. True, the non-land instruments could be marketed, or worn out, and their price used for immediate consumption wants; but this is

[3] Eugen V. Boehm-Bawerk, *Capital and Interest,* translated by William Smart, Introduction, p. ii.

[4] *Ibid.,* p. 6.

equally true of land. The notion of abstinence applies, then, equally to either, unless in the sense of the original labor of production—an argument from origins, and not a technological argument—a line of distinction in no wise applicable for competitive purposes, because beyond the possibility of application. No one can possibly tell what part of land fertility is or is not produced; and, for purposes of competitive production, or of personal abstinence in a competitive society, no one could have the slightest interest to inquire.

But of course it may nevertheless be true that the theory of land rent in no wise concerns the theory of interest; possibly enough, no question of rentals of any sort and no question of any hire or remuneration upon any kind of productive instruments or agents can have any bearing upon the rate of time discount; this is, indeed, one of our difficult problems; but if other rents and hires have this bearing, so also have land rents; if others have not, land rents have not. At any rate, next year's rent has to be discounted in order to get it into a present value, and the entire series of future rents have to be discounted to find a present market value for the land or other instrument; and it is clear that land is a future good as much as is any other instrument, and is paid for as are other instruments, according to the duration of the use granted.

Before productivity can be used to explain discount, explanation must be found for the division of the gross result of capital into original fact and surplus fact; and this upon the face of it would not appear to be difficult. We started with 100 in value—[price?]—and come out with 105; mere inspection would seem to suffice for the discovery of a surplus of 5. Yes, but why is it that the 100 that would accomplish this thing was worth only 100 in the beginning? To get the 100 of present value as the capital residuum after the surplus is deducted, we have to make use of this 5 as the discounted surplus; and it does not then seem open to explain the existence of the 5 by deducting the 100 from the gross 105.

> The adherents [of the productivity theory] . . . . understand it as meaning that, by the aid of capital, *more* is produced; that capital is the cause of a particular productive surplus result. . . . .

The words "to produce more" or "a productive surplus result" may mean one of two things. They may either mean that capital produces more *goods* or more *value,* and these are in no way identical. . . . .

That "capital is productive" . . . . may signify four things:

1. Capital has the capacity of serving towards the production of goods.

2. Capital has the power of serving towards the production of more goods than could be produced without it.

3. Capital has the power of serving towards the production of more value than could be produced without it.

4. Capital has the power of producing more value than it has in itself.[5]

Neither from the point of view of inadequacy nor of irrelevancy need Boehm-Bawerk's criticism of proposition 1 detain us long; proposition 2 he rightly declares to be useful only as subordinate to 3 and as somehow serving as the basis of 3; and then must be confronted the difficulty of getting 4 out of 3.

Capital does not produce alone; but it is certain that capital and other production goods working together get a greater total of results by weight and tale than can be had without the capital. But the first difficulty (by Boehm-Bawerk hardly touched, but by Wieser adequately recognized) is to find out why, in the distributive process, capital gets any part of this surplus, or does not get more or all of it, and does get just what we find it getting. This, however, may be regarded as a problem in distribution, and, perhaps, for the time being, may be taken, without further ado, as solvable, and as solved; that is to say, the theory of capital rent may possibly, for the purpose of the present argument, be set out of the discussion, precisely as Boehm-Bawerk has in fact declined to enter upon any consideration of the theory of land rent. Even so, however, this other work will have to be assumed to have been elsewhere done. But Boehm-Bawerk does not, so far as non-land instruments are concerned, appear to have assumed this, but rather to have taken it as part of his problem, and then to have omitted the necessary anaylsis; but we shall see.

But at any rate, admitting that to capital, in the co-operative production process, more goods or better goods can be traced and ascribed and accounted, this falls a good

[5] *Ibid.,* pp. 113–15.

way short of proving that the *value* of this larger sum is greater than the *value* of the original holding. For (1) how make sure that the 105 goods have the more of value over the 100? and (2), this explained, how then explain that the 100 of original holding did not forthwith take on this 105 of value?

> Does the fact that capital when employed is regularly followed by the appearance of a surplus in value, actually contain a sufficient proof that capital possesses a power to create value? . . . . Is the appearance of the snow a sufficient proof that a magic power resides in the summer snow to force up the quicksilver? . . . . Value is not produced and cannot be produced. What is produced is never anything but form, shape, material, combinations of material; therefore things, goods. These goods do not bring value with them ready made, as something inherent that accompanies production. . . . . Value grows not out of the past of goods but out of the future. It comes, not out of the workshop where goods come into existence, but out of the wants which these goods will satisfy. Value cannot be forged like a hammer or woven like a sheet. . . . . What production can do is never anything more than to create goods, in the hope that, according to the anticipated relations of demand and supply, they will obtain value.[6]

That capital does not directly produce value or surplus value, but only the things that have value, or that have value in excess of the original value, must be—for whatever it is worth—admitted. Nor does it matter to the contrary that all of this insistence upon value being derived from wants—from utility motiving demand, rather than in any part upon the supply situation—is of most dubious doctrinal validity. It still remains true that (1) the emergence of a surplus in value needs more proof than the mere existence of an increased volume of goods; and (2) this value step being accomplished, the problem would then exist of explaining why the greater value of the result was not forthwith reflected back upon the instrument, to the final cancellation of the surplus first established. But evidently all of this discussion on the part of Boehm-Bawerk must assume the quantitative comparability of an earlier with a later value. But if there is, in the nature of the case, as has been in earlier pages argued, no such thing possible

[6] Boehm-Bawerk, *op. cit.*, pp. 133, 134.

as this comparison of values, what then remain to be compared?

Is comparison more practicable between present goods and future goods? This has also been shown to be impossible, even were it not the fact that the case actually presented by capital productivity is one of production instruments at the beginning, and of consumption goods at the close. This objection has been forcibly urged by Wieser:

> Do the arms, bows, and nets—the capital of von Thumen's illustration—really reproduce themselves in the strictest sense of the term? Certainly not. They produce nothing but fish and the spoils of the chase. . . . . The return which, in the first instance, falls to be imputed to them is, consequently, a gross return in foreign things . . . . things with which they may possibly be compared in value but not in quantity. . . . . The same argument holds for capital in the developed economy, only that here the conditions are somewhat more complicated. . . . . No capital . . . . directly reproduces itself; each produces first a gross value in foreign things, in which, physically, its productivity cannot be seen. The capital of a baker produces bread, that of a miller, meal, that of a peasant, grain. In order that the baker may replace his capital again . . . . the gross return . . . . must be exchanged against the gross return of other capitals, indeed, against those returns which are attributed to land and labor, in order that the capital may be replaced, and the net return physically cognizable.[7]

Von Wieser's solution of the difficulty is, seemingly, an appeal to the facts of distribution, to the rental remuneration apportioned to capital through the competition of entrepreneurs. To the detail, the mechanism, and the processes of this distributive imputation, Wieser especially devotes attention. As for Boehm-Bawerk, as has been already noted, this distributive result is taken for granted; for us, however, the only fact of present importance is this—that to explain rentals or to assume their explanation is not to explain interest, although the explanation of interest may—or, for that matter, may not—be somehow hidden in the phenomenon of rentals.[8]

[7] Friedrich von Wieser, *Natural Value*, edited with a preface and analysis by William Smart, translated by Christian A. Malloch. Macmillan, 1893 (original, *Der natürliche Wert*, Prag, 1888).

[8] "The task of our theory is, in the last resort, to prove the value productivity of capital; but for this purpose it is necessary first to

Our present quarrel is, however, essentially one with the explanation of capital rental as given by Boehm-Bawerk. He insists strongly that the problem is (1) a value problem; (2) a surplus-value problem; the lack of clear appreciation of this value problem is, indeed, the gravamen of his complaint against all preceding interest theory. And why is it necessarily a value problem? Otherwise there can come out of the situation analyzed no surplus value. But in addition—and this receives all emphasis at the hands of Boehm-Bawerk—the problem must be fundamentally one of goods, and at the same time, of goods that are of comparable quality, for there could be no value productivity unless as based upon physical productivity.

Wieser's first criticism of Boehm-Bawerk's position was, then, that even with physical productivity there could result no value productivity, unless as the outcome of some distributional process, or processes, more or less mysterious and more or less shrilly calling for elucidation.

prove the fact of physical productivity [gross, not net, one assumes] as the scaffolding on which the other rests. The value productivity already presupposes the determination of the value of capital, but the value of capital can only be determined when the question of how to impute the physical return has been answered, because the value of capital rests on the share of return imputed [*zugerechnet*] to it. Just as the rent must first be ascertained before the value of any land can be calculated, and just as, generally speaking, the rules of imputation must be recognized before the value of production goods can be determined, so must also the imputation of the return to capital first be settled before we can take up the problem of its value."—Wieser, *op. cit.*, p. 126.

"The theory of interest, like that of rent, has always been discussed . . . . without any previous examination of the general laws of imputation. The result, however, as regards interest, has been immensely less satisfactory than as regards rent. . . . . In the case of interest, we have to deal with *the* essential fact in the problem of imputation, while in the case of rent we have to deal substantially with a detail capable of being conceived by itself, that, namely, of the differential imputation."—*Ibid.*, p. 128, note.

But, after all, it is evident that three steps are involved in any complete proof—(1) physical productivity, (2) net value productivity, (3) discount. And it is as to this third step, the derivation of the fact of discount upon rentals from the mere fact of rentals, if indeed, the derivation can be accomplished, that Wieser's account of the case appears to be seriously lacking.

But Boehm-Bawerk answered—not to Wieser, but to Clark, although Wieser's criticism came earlier than that of Clark, Wieser 1888, Clark 1893—that if a productivity could be established such that less goods of an earlier time could be set over against more goods of a later time, and if an increase of this kind could be established as general over the entire field of capital employment, a value productivity could thereupon be inferred.

It is, then, at this point that the notable controversy between Professor Boehm-Bawerk and Professor John B. Clark comes so exactly to fit our need. Clark's attack,[9] aside from its abstract-capital arguments and aspects which do not at present concern us, was precisely along the line of Wieser's criticisms as to the nature of physical productivity. Clark makes it clear that it is "not the recognition of time as an element in the problem of interest" that he would criticize, "but the manner in which time is made to act." In reality, "time does not put a discount upon particular goods; particular concrete goods are not, in actual life, subjected to comparison. It is not the driving-horse of '93 that is compared with one in '94." The capitalist does not decide, if he buys, to buy a horse, and finally conclude to do the buying at the end of a year. Nor, in fact, do the rainy-day savers—"quasi-capitalists" Clark calls them, since they have not definitively abandoned all idea of consumption, but are merely postponing—nor do these rainy-day people have in mind

> goods of like kind and quantity. . . . . The marked antithesis between that which they forego today and that which they expect to purchase later affords, indeed, the motive for their postponing. They do, no doubt, compare a sum of wealth [But do they? or only a sum of weal—an aggregate of expected services commanded by alternatives of purchasing power?] existing today with a like sum to be used later.

Clark attributes the error charged to Boehm-Bawerk to the acceptance of the notion of capital as concrete goods:

[9] "The Genesis of Capital," *Yale Review,* Vol. II, p. 302 (November, 1893).

For the common and practical conception of capital as a permanent fund or amount of wealth expressible in money though not actually embodied in money, there is substituted the conception of concrete goods distinguishable from others by the place that they occupy in the order of industrial phenomena.

For evidently, it is insisted, if capital at the outset and capital in a later aspect are to be compared, there will have to be a comparison of concrete tangible goods, or of these goods as expressed in some measure. And Clark insists that this comparison is actually, commercially, experientially, not of goods of like kind and quantity; if it is at all a comparison of concrete goods it must be of machinery for production with products for consumption; failing this, it must be of two aggregates of value—of two "sums of wealth," or of "amounts of wealth expressible in money;" and at this point Clark declares himself as standing for the money expression.

But is it possible to express value under any other form, to give it any denominator intelligible as between different men, otherwise than in terms of some conventional standard? In truth, when capital is *expressed* as a value quantity, is there anything for it but to use the money standard? Capital is wealth under the money denominator, since there is no other denominator possible. For ordinary purposes, truly, this difference between value and price is not significant. But for purposes of comparison over intervals of time or space, the difference is theoretically of fundamental import. For, whatever may be the truth for current exchanges, it is clear that for deferred-payment relations the only possible device for comparison must be found in some conventionally adopted *standard* of comparison.

But all this is, to the individual, not so very different from a value comparison; it is, for his purposes, unlike the ordinary non-deferred payment case only in this, that, with the deferred payment, each of the articles compared is an item out of an entirely different system of value exchanges from that of the other. Prices in current exchanges are merely and simply value phenomena expressed in some one commodity intermediate, conventionally selected for the purpose. As *value* phenomena, *value* items, two prices out

of distinct systems of exchange relations are not possible of comparison; the equality or inequality is merely one in terms of two bullion weights out of different value situations and systems. That the market price of a given horse is today $100 is the expression of a value relation between horse and metal; that the payment will be made a year from today in $105 is simply to say that a certain promised quantum of metal,—an aggregate of items out of a later value system, and, from the point of view of the present, of an unknowable exchange significance in that system,—is today exchangeable against the horse or against its equivalent 100 items of metal; no equivalence in value between the two sums of items of metal is asserted in any other sense than as a mere repetition of the brute and opaque fact that the 100 and the 105 are exchanging against each other.

Up to this point there is, then, nothing but commendation to be accorded to Clark's formulation. It is, however, true—or seemingly true—that he, as well as Boehm-Bawerk, assumes for capital a concrete tangible material basis, as a body of existing material things, out of which the money or value situation proceeds, and for which it stands; that is to say, his concept of capital requires, as the basis of the capital, an existing sum of industrial goods and intermediate products, social capital, but, all the while, subjected to a competitive, individualistic value adjustment. But in point of fact, as his corporation-illustration of capital, a favorite with him, shows, this price or value-denominator form of capital may be invested in all the various sorts of marketable or intermediately advantageous facts; there is no certainty—there is, indeed, no probability—that the total corporate capital ever will be,—or even if it ever is, will long remain, made up in its entirety of social capital as distinguished from consumption goods, rights, claims, franchises, good-will, and such other assets of similarly non-concrete character as a going business concern may find to its purpose.

Boehm-Bawerk appears to accept a goodly share of Clark's contention, still, however, making shift somehow to keep up with his talk of "goods."

> According to my view the superiority of present over future goods is based upon the very fact that one can, as a rule, make a *different* and more advantageous use of goods now present than

one can make of an equal quantity [?] of goods [?] which are not to be at one's disposal until some future moment.[10]

But what, Boehm-Bawerk asks, can this equal quantity of goods be, if not the same quantum of the same kind of goods? What sort of equality and what guarantee of equality can there otherwise be?

According to my theory, the man who saves will weigh whether the two hundred florins will have a greater value [subjective value? ulitity? service?] for him if consumed now as "present dollars," or if reserved for like use as "future dollars." . . . . Strictly speaking, the example chosen by Professor Clark is not a case of comparing present and future "goods" but only one of comparing present and future uses of the same sum of wealth [money? purchasing power in terms of money?]. But . . . . the decisive ideas are the same.[11]

And still insisting that he has not hereby abandoned his comparison of goods of "like kind and quantity," and declining to admit that he has gone over to a mere equality in terms of the conventional standard, Boehm-Bawerk continues:

Why do I add to my proposition that present goods are worth more in the average than future goods, the further qualification that they are worth more than goods of like kind and quantity? Simply because that without the second half of the proposition, the first half would be neither intelligible nor complete. . . . . To express clearly and correctly the superiority which difference of time gives present goods over future goods one must compare things of like kind, for example, dollars with dollars, and not diamonds with pebbles, and of like quantity, one thousand with one thousand, and not one thousand with two thousand. . . . . Especially would it be inadmissible . . . . to place over against each other like sums of value, instead of like sums of wealth. . . . . One would have to make the logically inconsistent assertion that a certain present value is greater than an equally great future value. . . . . Professor Clark speaks of a "sum of wealth," or an "amount of wealth." . . . . But . . . . if Professor Clark would force himself to a precise definition of his meaning, he would have to assert either exactly what I assert, or

[10] "The Positive Theory of Capital and Its Critics," *Quar. Jour. of Econ.*, Vol. IX, p. 118 (January, 1895).

[11] *Ibid.*, p. 117.

something positively false. . . . . For either he would mean by his amount of wealth an amount of goods, and in this sense, if he is to demonstrate the superiority of present goods, he must necessarily have reference . . . . to goods "of like kind and quantity," or he means an amount of value, and then the assertion . . . . contains the self-contradiction just criticised.[12]

And this would, indeed, be a serious difficulty if, as Boehm-Bawerk assumes, the alternatives presented offered the only possible solutions. But there is all the while the third possibility, that of the equality, in the present reckoning, of a future quantum of the standard with a present quantum of the standard.

And all the while Boehm-Bawerk stoutly insists that he is abiding by his notion of capital as concrete tangible goods, exclusive, one still assumes, of land.

But Clark, in his rejoinder,[13] insisting that the very statement of the interest problem conceives the case in terms of a fund and of income upon this fund and not in terms of concrete capital goods, mercilessly forces home the "comparison" issue. He denies that $1,000 at one time and $1,000 at another time can compare goods of like kind and quantity, though of course admitting that these dollars are, in a sense, themselves goods of like kind and quantity:

> The sum in the present will buy certain things, and a like sum hereafter will buy different things. Professor Boehm-Bawerk . . . . compares present and future goods of like kind and number, because he compares present dollars with future dollars. . . . . [The possessor of present wealth] compares two different subjective values obtainable by two different modes, of spending present money

He objects to Boehm-Bawerk's fashion of bringing money into the discussion, and then of objecting to "sums or quantities of wealth. . . . . The things to be compared are a dollar's worth of whatever-you-please now and a dollar's worth of whatever-you-please hereafter."

Nothing better than this or more clarifying for the purposes of the present discussion could be asked, nothing

[12] *Ibid.*, pp. 125, 126.

[13] "The Origin of Interest," *Quar. Jour. of Econ.*, Vol. IX, p. 257 (April, 1895).

more conclusive also, and it is hardly gracious to stop to regret that Professor Clark appears to believe that what a capitalist "really estimates is like quantities of wealth measurable in money;" for really the measurement function is not present. But for the purposes presently in hand this is mostly an irrelevant inaccuracy.

The discussion—this aspect of it—closes with Boehm-Bawerk's practical admission of the entire charge made against him: "Professor Clark seems to assume that I have, in my last article, 'introduced into the problem for the first time' the case of money. . . . . In this he is mistaken, etc.;" for Boehm-Bawerk asserts that he has done the thing over and again in the *Positive Theory*—in all of which the truth is clearly with Boehm-Bawerk—the more so, the more unfortunately for him, for in precisely so far is he disloyal to the doctrine, as held by him, of the concreteness of capital, and even more obtrusively disloyal to his comparison of "like kinds and quantities of goods." [14]

Bearing in mind that Boehm-Bawerk stands for capital as concrete non-land forms of wealth, and repudiates in terms—whatever else he does impliedly—the value or price

[14] "The Origin of Interest," *Quar. Jour. of Econ.*, Vol. IX, p. 380. The fact that concrete items of commodity, like ice, wine, or wheat, often increase in value with keeping, appeals to Macfarlane (Charles W. Macfarlane, "Value and Distribution," *Lippincott's*, 1900, p. 196) as "of course fatal to the contention that present goods are, as a rule, worth more than future goods."

These cases might properly be used to compel a retreat by Boehm-Bawerk from his position that capital is a category of concrete goods, to the tenable ground that capital is the price aspect of the concrete goods; but so far from being inconsistent with the doctrine that present values command an agio over future values, the wine case, at least, is an illustrative case of a capitalistic process taking place in time. Boehm-Bawerk stands for the view that ten dollars' worth of ice or wine or wheat of next year is not worth ten dollars now. This is not inconsistent with the fact that waiting till next year may change ten dollars' worth of present commodities into a *then* sum of value greater than ten dollars. The future value does not now rank as equal to a present value of the same denomination, but with time a change takes place in the volume of value, and for that reason the waiting is done. True, as Macfarlane argues, the increase in value may arise, as in the case of the wine or of the wheat, through changes in the demand; but this is merely to say that a year from now the *then* value will be greater than is the *now* value, not that the future good is now more valuable than the present good.

expression as an essential element in the capital concept for the existing competitive organization of society, some attention must now be directed to his interpretation of roundaboutness in capitalistic production as bearing upon interest theory. His proposition seems to be that, with a given development of technique, only a limited volume of capital can be applied to production, at any given degree of directness in productive methods; that only on terms of increasing roundaboutness can a market for more capital, and scarcity for any capital, become possible; and that increasing roundaboutness necessitates or implies the fact of diminishing returns.

We shall, in a later chapter, have occasion to question this alleged necessity of diminishing return anywhere in the dynamic field—whether for land or capital or labor—excepting upon the underlying assumption that the different factors in production or the different sorts of instrumental goods are manifesting different rates of increase, as, indeed, they commonly are. But in the actual situation of things, Boehm-Bawerk is doubtless right in his contention that capital goods tend, at present, toward diminishing productivity in some sense, not altogether clear, either of product by weight and tale, or of product by utility measure, or of product by value measure. There is a limit to the instruments that, in any given situation of technique, of labor, and of land, can be absorbed without diminishing advantage. There is, however, nothing to show that this fact of diminishing return is due to greater technological roundaboutness; there would, in truth, be this same law in more obtrusive manifestation, were the productive period not possibly to be lengthened; and there might be increasing volumes of capital consistently with shorter periods of production—shorter processes.

Yet surely it is true that "every extension of the productive process leads generally to some surplus result," [15]

[15] The use by Boehm-Bawerk of this roundaboutness doctrine is the point against which Professor Fetter has directed a most searching and destructive criticism. It would be hard to separate from the discussions of the present text that which is due directly to Professor Fetter and that which belongs to the author. But, in the main, so far as the

and it is doubtless true also that, with a given volume of capital, the more time, the more productivity; capital works in time. But this is equally true of land, and is the basis of rent on either land or capital. And it is—or may be—true that "production is more or less capitalistic according to the average remoteness" at which return comes to productive powers. But here again the principle applies equally to land powers, that is to say, the question is merely one of the importance of time in getting results out of instruments of production—no great discovery. The fact seems to be that the more any good helps in production—value-wise, as market-determined—the greater is it in volume as capital; but the farther away its product is in point of time the less is the present worth of its product, and thereby the less the value—the capital quantity—of the good as capital.

Capital is—and herein lies the chief point of its productive efficiency—an effective intermediate cause of the consummation of this profitable roundabout process. . . . . I say "intermediate cause," not "cause." Capital gives no independent impulse; it only

present discussion is not directly borrowed from Professor Fetter, it has been suggested by him.

At the same time, it is fair to say that Professor Clark, in the controversial articles lately referred to, has, in essentials, anticipated Professor Fetter's criticisms; all this, however, in the process of introducing or of supporting his regrettable abstract-capital concept, and, possibly, without entire appreciation of the full reach and import of the objections formulated by him to the position of Boehm-Bawerk.

So far as refers to Professor Fetter's treatment of time value—interest in the widely inclusive sense of the term—the doctrine should, perhaps, be rather held to be that of Wieser than of Fetter, though here also Fetter's discussion, in its development of the principle and in its consciousness of the significance and extent of the principle, is by much to be preferred.

The following is from *Natural Value,* p. 141:

"Every capital value—not alone the value of a sum of money but of every perishable productive instrument—is calculated by discounting (compare Menger, p. 135); that is to say, from the value of the future expected sum of products into which the capital will be transformed, the corresponding net return is deducted. Only that, practically, in discounting money claims, a fixed rate of interest, i. e., a definite relation between capital value and net return, is always assumed, and always emerges, while we are explaining the formation of this relation by first discovering the principle for estimating capital value."

No intention exists here to credit Wieser—or Menger—with originality in this regard; I have made no attempt to trace the doctrine back to its origin; sympathetically interpreted, Say, at any rate, appears to contain it. See p. 116.

transmits an impulse given it by the original productive powers, just as one billiard ball transmits motion to another. . . . . Capital is also the indirect cause of other profitable roundabout ways of production being entered upon—other, that is, than those in the course of which it itself has come into existence. When a people possesses much capital not only can it successfully complete those processes in the course of which the capital presently existing has come into being, but it can also adopt other and new methods. . . . . The greater the stock of capital, the larger is the share taken by the productive powers of the past in providing means of consumption for the present, and the less are the new productive powers of the present drawn on for the present.[16]

But as *ultimate* cause, certainly, it is only when we conceive of subsistence goods as capital that it is possible to regard capital as in any degree explaining the roundaboutness of the industrial process; only so far as capital in possession affects the aggregate of production may it bear upon the saving possible to take place. "In this sense but only in this sense, is it possible to say that man must already have capital before he can enter on roundabout methods of production."[17]

On something like this ground—it will be remembered—was Jevons led to assert that only subsistence goods are capital. But Boehm-Bawerk expressly dissents from this view; he denies that consumption goods are capital, even denies that long-time consumption goods, e. g., a house occupied by its owner, are capital, and asserts that only when there comes a fore-product—an intermediate product—has capital emerged.[18]

All this, then, makes him appear to say that there are two distinct causes co-operating to increase the roundaboutness of production: (1) larger supplies of capital, and (2) larger supplies of something not capital. His reconciliation for this apparent contradiction would probably be found in the view that these larger margins of goods over pressing current needs are relevant only to explain the larger supplies of instrumental goods—capital proper—and *through them* the greater roundaboutness in productive methods.

But precisely what does this notion of roundaboutness accurately mean? Surely to stop fishing, in order to make

[16] Boehm-Bawerk, *op. cit.*, p. 92.

[17] *Ibid.*, p. 93.

[18] *Ibid.*, p. 96.

a fish pole whereby later to catch more fish, is a roundabout method, since it is the interposing of a time-consuming process of getting ready to do the thing finally to be done, a submission to waiting, an abstinence. But is there therefore any warrant for saying that when once the fisherman has his pole in readiness, he will require with it a longer time than formerly in order to catch his first fish, and will derive his benefit only through the fact that, undergoing a longer-time process, he obtains a more than proportionally larger catch? Why not equally well more fish in the same time?

After all, is there in this fact of roundaboutness anything more, necessarily or characteristically, than a moreness of waiting *as volume* rather than a moreness purely as duration? If more capital goes into steam shovels, may it not be merely into more shovels of the old type; or, if into those of a new type, may these not be simply more elaborate and more expensive methods of doing the same work in fewer days? more breadth of waiting with less length?

But it may evidently be true that the larger capacity for waiting derived by society from the diminishing pressure of imperative needs upon producing power, may be turned to the development of methods demanding longer periods of time; with the sacrifice-significance of saving counting for less, vinegar and wine may advantageously be given longer and longer periods for the developing and ripening of their finer but less essential qualities. And so there will probably come many appliances demanding periods of longer duration, but justified, under the new conditions of waiting-burden, by the extra results achieved. But it is hardly to be believed that all new savings will go into this longer-time direction of change. But even of those that do so go, not all will go into instrumental goods of the technological sort; on the contrary some of the new power will go into better-constructed and more durable houses, long-time provision against future needs rationally and advantageously provided in the present time—that is, into future goods subject to the discount process into present worth—future income rendered over into a present value reckoning—that is, the emergence of capital and interest, with all the materials of the capitalization process, but with only consumption goods in question. And other savings will be going both into durable and into temporary improvements

upon the land; and meanwhile, under the lower stress of present need, the original powers of the soil are coming to be better husbanded, their destruction or impairment avoided, their profitable future results waited for. Abstinence is a land fact as well as a non-land fact.

But this is not, for present purposes, the only point of identity between consumption goods—consumable goods—and instrumental goods, or between non-land instruments and land instruments. Concurrently with Boehm-Bawerk's insistence that, as a question of origin, capital is not an independent element of production, in this respect, therefore, differing from land, he finds it also to his purpose to refute the ancient doctrine that capital is merely stored-up labor, and asserts of capital, as regarded from the productive-efficiency point of view: "Capital . . . . is stored up labor, but it is something more; it is stored up *valuable natural* power." [Italics are the present writer's.] [19]

But not only does this abandon the distinction of origin between land and capital, but it also forsakes the concrete-capital notion for the value concept; it conceives of capital as an intermediate fact through which the two original facts—man and environment—exert their instrumentality; and thus capital now appears as something which is not land, but yet is stored-up land product in its price-value expression.

In the chapter next following there appears to be also express recognition of non-instrumental forms of capital—the loan-fund form—or what may conceivably be classed as the abstract-capital form:

> This encroaching on the moment's enjoyment need by no means involve downright privation. With more productive labor, Crusoe's choice might not lie . . . . between bare living and comfortable living, but, perhaps, between comfortable and ample living. . . . . The essential thing is that the current endowment of productive powers should not be entirely claimed for the immediate consumption of the current period, but that a portion of this endowment should be retained for the consumption of a future period. . . . . A saving of *productive powers*, be it noted; for productive powers, and not the goods that constitute capital, are the immediate objects of saving. This is an important point, which must be strongly emphasized because, in the current view, too little consideration is given to it. Man saves consumption

[19] Boehm-Bawerk, *op. cit.*, p. 99.

goods, his means of enjoyment; he thus *saves* productive powers, and with these finally he can *produce* capital. . . . . The immediate cause of the production of capital is production; the mediate cause is saving. . . . . It is only exceptionally that capital itself is the immediate object of saving; it may happen in the case of those goods which, by nature, admit of being used either for production or for consumption, such as grain. To the extent that a man withdraws such goods from immediate use in consumption, his saving directly lays the foundation of capital.[20]

But whether all this can be strained to bear the loan-fund or abstract-capital interpretation, may perhaps be best decided by Boehm-Bawerk's analysis of the methods by which savings work out into the existence of concrete instrumental goods. Here, manifestly, the process is entirely misconceived; it is not true that

if the owner lend his wealth to others . . . . for consumption . . . . the sum lent is a direct advance of subsistence to the borrower; . . . . if for production . . . . it passes, as already described, from the borrowing employer to the laborers, as advance of subsistence. Thus the entire accumulated wealth of society—with the very trifling exception of that portion which the owners themselves consume—is really brought into the market as supply, of advances of subsistence.[21]

The bearing of the mere fact of perspective upon the interest rate is admitted and indeed asserted by Boehm-Bawerk:

There are three factors, each of which, independently of the other, is adequate to account for a difference between present and future goods in favor of the former. These three factors are: The difference in the circumstances of provision between the present and the future; the underestimate, due to perspective, of future advantages and future goods; and finally, the greater fruitfulness of lengthy methods of production.

The needy and careless value present goods more highly because they urgently require them in the present or think only about the present; the well off and the saving value them because they can accomplish more with them in the future. And thus, in the long run, everyone, whatever his economic position and whatever his economic temperament, has some ground for valuing present goods more highly than future.[22]

[20] Boehm-Bawerk, *op. cit.*, pp. 102, 103.
[21] *Ibid.*, p. 321.
[22] *Ibid.*, p. 277.

There is, indeed, no writer to deny the influence of perspective, although Wieser appears to criticize the rational justification for the influence,[23] and is not entirely definite as to its independent sufficiency for the emergence of an interest rate.

Fetter apparently ascribes the interest phenomenon entirely to perspective, allowing to productivity only such influence as it indirectly exercises through the effect upon the supply of goods with which the perspective principle concerns itself.[24]

Carver, insisting that were there no indisposition to save, no abstinence cost for capital, there could be no limitation upon the supply of capital—a pain-cost doctrine for the aggregate capital supply, with the implication that the cost margin is found at the highest point of saving-pain,—finds the demand to be made up of requirements partly for technological purposes and partly for consumption; the point of adjustment between the supply and the demand is

[23] "At bottom the economic conflict between the needs of today and those of tomorrow is really of a moral nature; it is a special case of the struggle between impulse and reason."—Wieser, *op. cit.*, p. 17.

"Present and future wants coming into competition with each other, are as a rule to be regarded as equal; that is to say, the difference in time does not necessitate any difference in valuation. To this proposition we have now to add a second: that within the sphere of production the difference in time does necessitate a difference in valuation of the goods employed in production. The two propositions are in perfect accord and mutually supplement one another. . . . . If capital . . . . is able to yield continuously the same returns, this must find expression in a valuation which ascribes to capital a higher value, the earlier the point of time it comes into our possession. For the earlier the point of time, the earlier, and consequently the greater, the return that may be expected."—Wieser, *op. cit.*, p. 143.

[24] I confess my inability to justify, by direct quotation or by strict logical necessity, this interpretation. It seems to me, however, to be necessitated by the general trend and direction both of Professor Fetter's critical and of his constructive work. At any rate, I am totally unable, otherwise than upon this interpretation, to make out the relation posited by him between technological productivity and time discount.

the interest rate:[25] all of which Boehm-Bawerk would accept, with some mild protest about the word *abstinence,* and with much relative insistence and emphasis upon demand or utility, and finally with a peremptory call that the value-surplus fact get somehow out of all this a definite explanation. And in this call the economic world will join, at the same time, however, probably denying that Boehm-Bawerk has himself performed the task, as set forth by him in the following:

> The statement of how productivity of capital works into and together with the other two grounds of the higher estimation of present goods, I consider one of the most difficult problems of the theory of interest and at the same time the one which must decide the fate of that theory.[26]

In view of all this explicit recognition of perspective, it only remains, for purposes of review and of criticism, to set forth, without extended comment, the surprising doctrines both of Boehm-Bawerk and of Wieser in respect to land rentals, and, less distinctly enunciated, the logically associated doctrines for consumption loans.

> In a certain sense interest on production and interest on consumption have a common source. Both of them relate to a difference in the valuation of present and of future goods, only that the causes which produce this difference are distinct. (Wieser, *op. cit.,* p. 155.)
>
> If they [houses] are to be produced, there must be the prospect that their value will include the full and permanent maintenance of the undertaker's capital, whether this value be realized through selling or through letting the property. . . . . The interest of hire or let must, therefore, stand at the usual amount of interest on capital. It is an application of the law of costs, according to which the customary interest on capital is reckoned among costs. (Wieser, *op. cit.,* p. 157.)
>
> The value of land is calculated . . . . by capitalizing the rent of land. . . . . In order to capitalize, a given rate of interest is necessary; and that an interest rate may be given, we need capital. . . . . Land has not the same double function as productive

[25] "The Place of Abstinence in the Theory of Interest," *Quar. Jour. of Econ.,* October, 1893.

[26] *Positive Theory,* p. 277, note.

factor and as product. It produces without being produced; and thus, to determine the value of land, it becomes necessary to bring to our aid the standard of capitalization which we find in capital. (Wieser, *op. cit.*, pp. 158, 159.)

This implies either that abstinence is not sufficient as the basis of an interest rate, or that the individual owner of land exercises no abstinence with regard to it, or that, in general, there is no interest possible excepting by derivation from technological non-land productivity together with some sort of distributive imputation.

That interest is possible independently of technological productivity would seem to be inferable from Boehm-Bawerk's assertion of the threefold basis; if so, however, this must mean that interest is not a phenomenon appearing exclusively in connection with capital, but, on the contrary, may attach to something which is not capital. And yet, on page 49 of the *Positive Theory*, in discussing Knies's concept of capital, with especial reference to interest on money loans, it is said:

> Does the interest-bearing money belong to capital, or does it not? . . . . If we answer in the negative . . . . we commit ourselves to the strange doctrine that a thing which undoubtedly bears interest is not capital.

It is, however, in a later chapter said that interest may be paid for the use of land; that land is to be regarded as a productive instrument equally with capital; like capital, it manifests its productivity in time, and also somehow, by virtue of its concrete productivity, furnishes, like capital, the basis of value productivity.

> The theoretical explanation of rent from land coincides ultimately with the explanation of interest obtained from durable concrete capital, and land rent is nothing but a special case of interest obtained from durable goods. . . . . Manifestly the fact that rent of land and rent of capital have one common final cause is not a sufficient reason for abolishing every distinction between them. Between land and capital there are so many important differences, both theoretical and practical, that, notwithstanding the common feature just described, we are justified in adhering to the decision made in a former chapter to keep land out of the conception of capital.[27]

[27] *Positive Theory*, pp. 355–57.

It may be worth while, for purposes of a convenient summary, to reproduce Boehm-Bawerk's own synopsis of the reasons referred to

That the services from any durable consumption good, a house, for example, are mainly future services, and are thereby subject to a discount into present worth as the capitalized value of the house, is fully and clearly asserted by Boehm-Bawerk; but here again the concept of capital is not widened to include goods of this sort; they are regarded as mere long-time consumption goods and not capital, on the ground that they are not "intermediate products, destined to serve toward further production." But none the less is it said:

> Our theory traces back the profits which durable goods yield their owner to the selfsame causes as explain interest on loans and undertaker's profit on production. . . . . Supposing that the other kinds of interest could be explained by the productivity of capital, obviously this was no explanation of the interest yielded by a durable consumption good which produced nothing, such as a dwelling-house, household furniture, a hired piano, the books of a lending library. . . . . The true primary fact is the lower value of future goods and future services.[28]

in support of the distinction under consideration. The bracketed interpolations must be pardoned in the interests of space.

"In many essential respects land and capital take different ways: (1) The former is immovable; the latter, for the most part, movable [irrelevant]; (2) the former is a gift of nature; the latter a result of labor [Neither side of the antithesis is always true; and Boehm-Bawerk has himself admitted as much for the latter statement.]; (3) the former cannot be increased; the latter can be [untrue]; (4) the landowner has a social and economic position essentially different from that of the capitalist; property in land is justified on essentially different grounds from property in movables [ethics, law, or politics—at all events not economics]; (5) land is the special object of a kind of production which is economically distinguished by many important peculiarities [Technology? At any rate, diminishing returns are not peculiar to land.]; (6) income from land, while subject to many laws in common with income from capital, obeys many distinct laws of its own—land rent, for instance, rising with economical development, while interest falls." [As Boehm-Bawerk has just shown, capital rent and land rent capitalize under precisely the same rate; and many forces in economic development bear to diminish rent.]—*Positive Theory*, p. 55.

[28] *Ibid.*, pp. 346–49.

CHAPTER XV

INTEREST (*concluded*)

To discuss economic problems in terms of price rather than of value, to place the emphasis upon money rather than upon the things that money will buy, to talk of nominal rather than of real wages, is commonly accepted as the mark of superficial thinking; that price is a mere half-way house between value and value or between utility and utility has come to mean that it is for most theoretical purposes no house at all.

It is nevertheless important to appreciate how much of modern economic life woud be different, and how much of economic theory would require reformulation, were there no money and no money price. The problem reaches even so far, indeed, as to have raised the question whether, without a money denominator, the value problem would be possible of solution. What would be the theoretical situation were there no conventional standard and medium?

It is at any rate evident that, at no matter what inconvenience, there would be barter enough in this moneyless society; division and specialization of employment would obtain very much as under present conditions; recognized value relations would establish themselves between such classes of goods as in considerable measure were exchanged against each other, and under some sort of arbitrage these relations would acquire a considerable degree of definiteness. That is to say, value relations would exist essentially as at present, but all this without any price system. But would there exist no medium of exchange? No. Or, rather, there would be not one medium but an indefinite number of media; for by trading and retrading, possessors of commodities for exchange would finally place themselves in command of commodities exchangeable against the particular commodities desired;

this, indeed, would be the method of arbitrage by which a fairly complete system of value relations would get itself established. That is to say, each man would, as his necessities should dictate, be employing a medium of exchange, an intermediate between his wares for sale and the consumption goods desired by him, but this intermediate would be, for different men, and for each man at different times, a different medium.

A money economy exists only when one intermediate of exchange and medium of value expression is conventionally established.

So far, however, no great issues appear to depend upon the presence of a money-price system. But how about deferred payments, and speculative or long-time merchandising, and all the ramifications of the system of credit?

Whatever may be the fact with regard to subjective value—of which more later—it must be true that market value can be expressed only in terms of something else; but expressed, be it noted, and not measured, and expressed only in the sense of the equivalency implied in the mere fact of exchange.

Not merely so, but value can never be expressed in terms of more than one thing at a time—any more than the height of any particular man can be expressed as the height of a dozen different men at once. The market value of any one thing is, then, expressible as a ratio of exchange with reference to any one of all the different things against which the commodity in question is actually exchanged.

In German usage, *Preis* is the generic term for the good on either side of an exchange, in its function of *quid pro quo*. If the exchange relation is one of goods against the money good, the money is called the *Geld-Preis*. In English usage—as goes without saying—*price* has been limited to mean exchange power expressed in terms of money solely. Thus, while on the whole the German usage may well appear to be the more philosophical, it must remain true that popularly *price* means the money that a thing will sell for, and that

some term for this money relation, this expression of exchange power in terms of a conventionally specialized money commodity, is imperatively called for.

But in relations of exchange over considerable intervals of time or of space, the case no longer presents itself as one of terminology but rather as one of controlling business necessity. Here the only feasible *quid pro quo* is the money intermediate; no other price than money price has practical standing in the problem; price and money price are one.

What, indeed, would be the deferred-payment situation in the absence of any conventional standard in which the deferred-payment relation might be expressed? The farmer would hardly contract to accept a hay payment as against his present advances of hay, nor much more probably, any variety of grain; later, as well as now, he is likely to have these in surplus. There would be nothing for it but to sell against the promise of whatever commodity should seem most likely to be the commodity desired at the expiration of the payment term, or to arrange to receive that commodity seemingly most likely to be readily marketable *as an intermediate*. That is to say, here again the result would be not the absence of an intermediate, but the multiplication of intermediates, and each of these would serve, for the respective individual interested, merely as a fund of general purchasing power, but of a most regrettably speculative quality.

All of which sums up, as we have already seen, in saying that so-called value relations over interval of time are really nothing but utility relations worked out in terms of price, and that these relations are practicably incapable of any other manner of working out. Try to interpret the assertion that 100 of today is worth 105 of next year; it will be found to mean, (1) that 100 articles of today exchange today against the promise of 105 articles of similar kind—an exchange relation worked out in terms of the present value system—a relation in which either side of the exchange is the price expression of the other, without

the employment of any money-price mechanism; or (2) that either side of the exchange relation commands as much money now as does the other now—a price relation of the money sort; or (3) that, because of the actually ruling discount rate, 105 of promised money exchanges against 100 of present money. But what would it mean to say that the 105 of the later time will *then* have the same value that the 100 has *now?* The 100 of today—100 hats or 100 dollars—is an item in a present exchange system, a present scheme of value relations; the 105 belongs to another and a distinct system. The only value link between the two systems is this of exchange relations established between two quantities of something chosen as standard for the purpose of the deferred-payment relation. And in this standard of deferred payment all notion of equality in value under some value-measure system is lacking. The situation is simply this: By virtue of the fact that the selected intermediate is one of wide acceptability, and offers, as is thought, the closest possible approximation to general purchasing power—something approaching an equality in utility, in service, is possible; and this is all that is possible.

But the money medium is not adapted to *measure* the service; and it being true that utility relations in exchange are purely personal categories always, it must follow that if any commodity exchanged finds anywhere a measure of utility, that measure will have to be the *quid pro quo* of each respective act of exchange. But the fact is that to neither of the traders can the exchanged commodities be in equilibrium of utility, else the exchange would not have taken place. The fact of exchange does not, then, anywhere attest equality of utility, but only equality of value in the sense of actual exchangeability.

And all this is merely a repetition of the doctrine that the interest problem is one of price and of discount reckoned upon price, and that all value productivity, so called, is really productivity indicated and proved and expressed by increase in price; gains are not value gains in any other

sense than that they are utility gains worked out in terms of price.

Savings and capital creation.—It was pointed out upon an earlier page that the collectivist concept of capital would include all technologically completed goods deferred in consumption, but would in the main have reference to instrumental goods, and this without occasion for any distinction between land and other productive instruments. Rights and credit claims of various orders could have no place; saving, that is to say, would embody itself in concrete material forms; loan-fund capital could interpose no intermediate stages between saving and social capitalization, and no possible justification could exist for the emergence of any abstract-capital concept.

It was, however, urged that social saving would have this much in common with competitive saving, that, under either system, saving must imply postponed consumption; private saving, privately postponed consumption; social saving, a social postponement, either directly in the saving of consumption goods, or indirectly by the diverting of productive energies from product ends to instrument means.

But at what point, in a collectivist society, would saving and capitalization rationally find their limit? Surely only such surplus as should exist over imperative present need could go to capitalization; but what would be the farther limit?

As long as a later utility of larger volume was to be had through the postponement of a present service, so long saving would be a rational process. In this computation, different individuals would have to count at an equality, and future members of society and present members of society be indifferently regarded.

But there would still be limitations to be recognized upon the postponement policy. The substitution of instrumental goods for labor is, as we have seen, a limited process;

the point somewhere arrives where the indirect capitalistic method gives no greater product than does the direct labor method. Precisely where this point falls is in large part a question of the development of industrial technique. After the uncivilized man has provided himself with one or two boats and a fair supply of poles and lines, he will do ill to increase his supply in these directions. So for the more skilled workman there is a limit to the number of shovels, plows, reapers, or looms that he can adequately use or tend. So also the point of capital saturation is, in any society, in considerable measure a question of the standard of comfort, and of the development of varied directions of consumption; but in any given situation there is a limit point. Again, while, in a collectivist society, hazards of criminal predation would be inconsiderable, other hazards of loss with passing time would need to be considered—dangers of fire, and of water, and of wind, and of decay. In an environment earth-shaking, like that of Japan, the same rational preference as with the Japanese would exist for one-storied unsubstantial architecture. And finally, the law of diminishing utility with expanding supply would have its application; and all the while the comparison of the present with the future would proceed neither in terms of value nor of concrete product, but of units or totals of service.

Sufficiently modified, similar limitations hold for the isolated individual economy. But here, there enter considerations of the uncertainty of life, and of needs changing in intensity and in direction with advancing age. So the appeal of different desires and the recognition of the need for saving are greatly modified accordingly as there are or are not parents, wife, and offspring to be taken into the reckoning.

Carried over into a competitive society, the necessary modifications are more profound and more far reaching. Subjective changes in need are more pronounced with a more complex life; the objective hazards of property-own-

ing become in some directions greater, in other directions less. And more importantly still, much saving takes place for individual purposes which may not at all infer a social saving, and which may imply merely a deferred right of consumption out of another's mortgaged production, or may be even a right of privilege, monopoly, tribute, or pension at the charge of one's neighbors.

Thus, how much the individual may rationally save, and the form in which individual saving may rationally take place, have little or no reference to the social advantage or interest. And the hazards of non-employment, and the hazards either of untimely death or of death too long delayed, require a measure of saving which may well in the average far outrun the average actual need for rainy-day purposes.[1] Here enter all sorts of considerations of family pride, and of interest in the family prestige of competitively ostentatious establishments.

How far may saving extend in a competitive society, and what shall be, in the social interest, its theoretical limit?

If any reply is possible, it cannot be given now (see p. 529, note). For present purposes, we need merely to examine the actual functioning of abstinence under competitive conditions. Is it possible here, as in a collective or a Crusoe economy, that saving may so far saturate the demand as to cancel the interest agio? or as even to involve a negative interest—a charge for safe keeping? As not rarely one pays to have his traveling-bag guarded, so, under conditions of undeveloped industrial technique, and of public disorder and turbulence, it is within possibility, as earlier centuries proved, that negative interest be sometimes collected.

If, to the conditions already assumed, it be added that no money system exists, or that the money supply is so small, in volume and in employment, as to make impos-

[1] There is something here of bearing upon the question of state insurance and the possibly associated problem of oversaving; but there is at present neither time nor space for the discussion.

sible or impracticable any considerable saving through its mediation, it might readily fall out that the investment supply would be large enough to swamp the aggregate borrowing demand for consumption purposes or for industrial or trading purposes.

Nor, be it noted, does this reasoning assume the cancellation of all abstinence protest or cost; it assumes simply that so intense is the appreciation of probable or possible future needs, or so great the utility increment due to purely subjective considerations, as to overbalance the actual and the rational indisposition toward waiting.

But whether the protest against waiting would be a rational one, were the uncertainties of life and of investment not constant factors in the problem, is not at all clear. And whether generally among men the emphasis is not at present too much upon the possibility of old-age penury and suffering, and too little upon the fact that youth is the period when pleasures are vivid and wealth is rich with service, moralists rather than economists may profitably discuss; and whether, on the whole, too great—or too little—thought is, under present conditions, devoted to making provision for the needs of wife and children, and for the pride and power of future generations, may also be of interest to some one other than the economist. But it is here sufficient to note that an affirmative advantage must everywhere make goods its case against the fundamental preference for immediate enjoyment, else there can be no postponement of consumption; and changes of human disposition in this direction may greatly vary the relation between the demand for capital and its supply. Technological productivity does not, then, for all possible conditions, guarantee an interest agio.[2]

[2] This fact of psychological perspective, while accepted as an opaque definitive datum of human nature—a brute fact, if one may be allowed the term in this connection—has had its rationality put much in question. Why should not the enjoyment of next year appeal to the rational mind as strongly as the enjoyment of today? If it be human frailty that it does not, and it is yet the fact that it does not,

Whether Crusoe should hold a particular item of goods over from the present to the future would depend on whether, in the present reckoning, the future gratification out-

economics will have to get along somehow with the situation, but may at the same time recognize the irrationality of it. In this connection Wieser has already been quoted (p. 213) Pantaleoni also, in discussing whether remoteness has to do with the present subjective value of goods, otherwise than by virtue of the aspect of uncertainty, says: "A remote pleasure or pain, if supposed to be absolutely certain, must, other conditions being equal, be of equal weight with a proximate pleasure or pain" (*Pure Economics,* Macmillan, 1898, p. 26). Pantaleoni adds that valuations made inconsistently with this principle are anti-hedonistic and anti-economic; but that the principle of contingency must allow not only for the uncertainty of occurrence but also for possible changes in the individual in point of susceptibility to the pain or pleasure in question; but it is added: "In the majority of instances, these valuations are carried on with only approximate correctness. This is tantamount to saying that error is a principal source of anti-economic acts, and operates in this sense on a vast scale. . . . . But this admission, although it can and must be made, in order to explain real phenomena, consisting of human actions, can never be adduced as explanatory of the phenomena of *pure* or *rational economics,* i. e., of what would occur if all men were perfect hedonists." The subject of pure economics approached in this manner must become, one would think, mostly a mere discipline.

With some seeming skepticism as to the rationality of the perspective fact, Carver has nevertheless treated abstinence as a cost fact, by arguing from what would become of the interest rate, if postponed consumption were not felt as a burden—if there were no indisposition to save. ("The Place of Abstinence in the Theory of Interest," *Quar. Jour. of Econ.,* October, 1893.) And Sidgwick has speculated upon the effects upon the values of productive instruments, land, for example, if the interest rate should fall to zero—all to the conclusion that land values would be infinite (but I am totally unable to find in my copy of Sidgwick the discussion which I seem to myself to remember very clearly). It should, perhaps, better have been deduced that, with capital services free, land and labor could retain exchange value only to the extent that the principle of substitution should not apply—that is, only in those cases where the functions of labor and of land could not be fulfilled by capital. The outcome, then, of disappearing interest should simply be a great diminution in the volume of unfree—valuable—goods, with the valuation of such as remained valuable arrived at without the aid of the discount principle—that is to say, with all uses present and future equally regarded as present items in one and the same exchange system.

But however all this may be—and it is not altogether clear—it is at any rate certain enough that, with abstinence resistance to saving entirely removed, great changes, ranging from the infinite value of land and labor to the vanishing values of either, might be formulated as possible; and pretty much anything else might also take place, since all economic science would be at an end. For the assumption is

ranked the present; and if the good in question were one of concrete productivity, the same question of choice between the present fact and the objectively greater future

entirely illegitimate. Recalling that the psychology of saving is simply that of postponed service, it becomes evident that the assumption of willingness indefinitely to postpone consumption is tacitly to abandon needs and desires as the bases of economic activity, to assume a total lack of demand for products, and thereby to make production an absurdity, unless, indeed, as a play activity, like the mud-pie making of children—with whom also there is said to exist a precisely similar disposition toward indefinite postponement of consumption.

This view forsakes the fundamental assumptions of the science —that human desires are the primary fact in economics, and that all production takes place as a mere intermediate toward consumption; it is, in truth, a doctrine parallel, in its obliviousness of the economic center of gravity, to the earlier doctrine of unproductive consumption, and to the theoretical view which held laborers' subsistence supplies to be technological capital like coal, and that regarded man as a machine for the end of turning out product, and held the maximum of accumulation to be the economic end and test—a doctrine parallel in morals to the insane exaggeration of the virtue of frugality, and to the ideal of dying rich as standard of life and measure of success, a doctrine which, generally applied, would veto any advance in the standard of living, and which, as partially applied in the lethargy and chilled demand of post-panic depression, presents not merely the bad logic and paradox but the prolonged miseries and disasters of underconsumption.

The science of economics is free of the burden either of justifying the ways of God before men or the ways of men before any possible tribunal; but inasmuch as there is no significance in production but as a means toward consumption, and no justification for saving but as postponed service, it must be as rational as it is fundamental in economic life that human nature should prefer the immediate to the distant good, and should regard as an evil every postponed consumption that cannot through positive advantages establish a balance of benefit.

Expectation of increment is, then, everywhere the condition on which depends the consent to waiting. Not merely every boy, but every man, would forthwith, after breakfast, proceed to make way with his lunch but for the fact that a larger service is recognized as attendant upon the later consumption. True it is, that if there were no burden cost in waiting, the supplies of capital would be unlimited; but it is forthwith to be added that if men could content themselves with postponing the services of wealth to an indefinite future, they would never produce anything for either earlier or later service. Unresisting postponement presupposes and assumes an absence of the desire for goods; wealth eternally waited for is not wealth at all. There is, as all agree, no utility—no wealth—excepting as related to a human need or desire. A desire for a good never to be enjoyed is a contradiction in terms; a good of this sort is a no-good. Unprotesting abstinence implies the lack of interest to produce and the absence of anything to be saved. Thus, to assume the general and continuous non-burdensomeness of postponement is to cancel the possibility of all

fact would present itself. The cow of today would, for example, outrank the cow and calf of next year, if the waiting-time subtracted from the appraisal significance of

economic discussion—to saw off upon the hither side the limb upon which all economists are sitting.

It is doubtless anathema to talk in economics of overproduction; and underconsumption appears like an evasive and timid way of saying the same thing. It is commonly argued that the desires of men for wealth are absolutely insatiable, or, if not quite this, are, at least, far beyond any practical possibility of satiation; goods in general cannot be in superfluity so long as the desires of any member of the productive group are still unsatisfied. Mill's argument for this position looks conclusive: Goods themselves furnish the demand for goods; money is a mere intermediate through which goods are exchanging against one another. Total demand and total supply therefore analyze ultimately into the same aggregate of social product; supply can then increase only as demand increases; overproduction, in any other than the purely relative sense, is then an impossibility.

This would all be clear enough if, in fact, exchanges were always of existing goods against existing goods—if, that is, the intermediate commodity and other forms of postponed purchasing power were not factors in the problem. In truth, however, goods have to be conceived in another aspect than this solely of present goods against present goods; the case sometimes presents itself as one of present goods against future goods, and for this purpose moneys and credits, as the form of *quid pro quo* into which existing goods are seeking exchange, may at one time be receiving a much more marked emphasis than at another. When the exaggerated desirability of postponed consumption obtains, the demand for ordinary commodities slackens. The problem then transforms itself into this—how shall men, in the average, increase their production and sale of goods consistently with a diminished buying and consuming of goods?

Without attempting any explanation of the causes lying behind the recurrent phenomena of commercial crisis, and confining our attention solely to the post-crisis period of depression, we come upon two contrasted, though perhaps not conflicting, lines of explanation, the one interpreting the situation in terms of disturbed production reacting upon consumption, the other, in terms of disturbed consumption reacting upon production; the one position may be stated as follows:

"The explanation is found in the imprenditor system, and for the most part in the relation of employer with employee. The imprenditor buys raw materials and employs laborers for the purpose of making profits. He is a mere intermediary. If he is unable in marketing his products to make his receipts exceed his outlays, he withdraws from production, however social interests may thereby suffer.

"In the fall of prices following a panic, not all commodities fall with equal rapidity. Goods from foreign sources, for example, may nearly or quite hold their old level of prices. Other products are perhaps produced under conditions more or less approaching monopoly; others again may be well sustained in price through speculative holdings by the producers or through restriction of output. The imprendi-

the future good at a greater rate than the objective productivity of the good could add.

And now we ask: On what terms, in an individualistic

tor must produce in view of market prices; prices are his master. If his productive outlays are too high, he must withdraw from business. There is, however, for most employers, one resource and one only, that of reducing wages. A small reduction may possibly be sufficient. But here is precisely the kernel of the difficulty. Even were raw materials for all industries falling regularly and equally, the imprenditor would still be compelled by lower prices of product to reduce the wages paid. As a practical fact this is a difficult matter. Laborers resist angrily and persistently. They do not understand the necessity of the reduction—they believe that they have merely to stand firm. To prevent a strike or a long continuance of strained relations, the employer often finds it not less profitable and much more comfortable to close his shop. In times of depression products are small enough at the best.

"Inertia is a fact that must be reckoned with. Wages rise slowly and, when fall is inevitable, fall slowly and with painful struggle. . . . . Were it possible for prices to fall evenly all along the line, and for wages to be forced to fall in conformity with prices, the depression following upon panic would be unimportant and of short duration. But (1) as long as indebtedness does not fall as measured in money units, there is tremendous resistance—in many cases a struggle for very financial existence—against sale and liquidation at the ruling level of prices. Even were this difficulty avoided . . . . there would still remain (2) the inequalities already mentioned in the fall of commodities generally. . . . . (3) The difficulty of accurately adjusting wage-payments to market prices. . . . . Capital, labor, and employer must co-operate in production. If with any employer laborers insist upon all, or more than all, of the product, production must cease."—Davenport, *op. cit.*, p. 363.

To Say, whose *loi de débouchées* was the beginning of the doctrine that a general overproduction is impossible, and whose reasoning was later accepted in turn by James Mill, by John Stuart Mill, and by Cairnes, this disturbed-production explanation of depression would have been entirely satisfactory. But as usual, Malthus was a sceptic; and in his insurgency against the doctrine of the impossibility of a "general glut," he contrived finally to put himself into conflict with Ricardo. This noteworthy controversy will serve us in good stead as background for our general problem:

"According to the best authorities . . . . what is meant by the glut of a particular commodity is such an abundant supply of it compared with the demand as to make its price fall below the cost of production; and what is meant by a general glut is such an abundance of a large mass of commodities of different kinds, as to make them all fall below the general price, or the ordinary costs of production, without any proportionate rise of price in any other equally large mass of commodities. . . . . Mr. Mill endeavors to show that demand and supply are always equal in the aggregate; that an oversupply of some commodities must always be balanced by an undersupply of others; and that therefore a general glut is impossible." (Rev. T. R. Malthus,

non-money economy, should one man lend to another man a cow? At the minimum, the payment, whether agreed to be made in terms of cows or in terms of other utilities,

Definitions in Political Economy, London, John Murray, 1827, chap. on James Mill.) And Malthus rightly points out that Mill would be entirely correct here if demand meant nothing more than the amount consumed; doubtless the entire product may be sold and be consumed at some price, but not necessarily at a price remunerative to the producers; if nothing more is meant by Mill than to assert that consumption will equal production, "this . . . . is really no more than saying that if commodities were produced in such abundance as to be sold at half their costs of production, they would still be somehow or other consumed—a truism equally obvious and futile. But . . . . Mr. Mill . . . . observes, 'It is evident that whatever a man has produced and does not want to keep for his own consumption is a stock which he may give in exchange for other commodities. . . . . His demand is actually equal to the amount which he has produced and does not mean to consume!'" (*Elements of Pol. Econ.,* sec. 3, p. 225.)

But Malthus insists that hats and shoes may very well be selling against each other at the old ratios and yet both be selling at less than cost; the question is merely whether this can be true for commodities generally. "The hop-planter who takes a hundred bags of hops to Wighill fair, thinks little more about the supply of hats and shoes than he does about the spots in the sun. What does he think about, then? and what does he want to exchange his hops for? Mr. Mill seems to be of opinion that it would show great ignorance of political economy to say that what he wants is money; yet . . . . it really is money that he wants and . . . . this money he must obtain . . . . in exchange for the great mass of what he has brought to market, or he will be unable to carry on his business as a hop-planter; . . . . he must pay the rent of his hop grounds in money; . . . . he must pay for his poles, his bags, his implements in money. . . . . He must pay the laborers . . . . during the course of the next year in money, and . . . . it is in money and in money alone of all the articles brought to the fair, that he can calculate his profits."

We may stop to note that Malthus is probably right here as to the actual psychology of the case; people do look at things in this way; and perhaps it does not matter to the argument whether or not they ought. But all the while, the precise question at issue is not entirely clear. Malthus says it is whether commodities generally may not be being produced at a loss to the producers. "True . . . . the landlords and laborers who are paid in money will finally exchange it for something else, as no one enjoys money *in kind,* except the miser; but the landlord . . . . would be little inclined to accept from the planter the articles which he could get at the fair in exchange for his hops. . . . . And as matter of fact the laborer . . . . is paid in money.

"Foreign trade is no doubt mainly a trade of barter. But the question whether British woolens find an adequate market in the United States does not depend upon their purchasing the same quantity of tobacco as usual, but upon whether the tobacco or whatever the return may be, will purchase the British money or the British

would need be, to the lender, in view of all his circumstances, of as great significance as the present cow, whether as immediate consumption good or as a production good to be kept in the possession of the owner. That is to say, the

labor necessary to enable the woolen manufacturer to carry on his business successfully. If woolen and tobacco are both below the costs of manufacture in money or labor, both parties may be carrying on a losing trade. . . . . This is an answer to the pamphlet which M. Say addressed to me some years ago. . . . The power of replacing capital will mainly depend on the power of commanding labor. . . . . Commodities in general . . . . are continually rising or falling in money price . . . . while the money price of labor remains much more nearly the same.

"The question of a glut is exclusively whether it may be general, as well as particular, and not whether it may be permanent as well as temporary. . . . . What are the costs of production? They are either the amount of money necessary to repay the labor worked up in the commodity, and in the tools . . . . etc. . . . . with the ordinary profits, etc. . . . . or they are the quantity of labor in kind, etc. . . . . Now surely it cannot be denied theoretically that all commodities produced in this country may fall in comparison with a commodity produced in Mexico. As little can it be denied theoretically that all commodities produced by British labor may fall in comparison with that labor."

Malthus makes no question that the glut will be quickly followed by reduced production, and appears to regard this as a fact of remedy rather than a second and aggravated stage of the disease.

As Malthus has drawn the issue between himself and Mill, Malthus is clearly enough right; wages and raw materials and contractual obligations do not keep pace in change with the course of general prices; the phenomena neither of boom nor of post-panic depression can be understood excepting in the light of this fact. But the larger question whether, irrespective of costs and entrepreneur profits, and of continuing entrepreneur activity, the production of goods may outrun temporarily the disposition to consume at no matter how low a price, is not touched by this discussion. Malthus, indeed, admits, as we have seen, that all the goods can and must find consumers. In other places, however, in order that entrepreneur profits be maintained, he recommends luxurious consumption as temporary remedy; and it was upon this issue that Ricardo entered the lists. (See Bonar, *Letters of Ricardo to Malthus, op. cit.*, pp. 188–90.)

But upon the question whether present consumption may not be too greatly limited beyond the possibility of the savings being absorbed by social capitalization, and with a concurrent overemphasis upon the securing of representatives of reserved and postponed purchasing power—goods refusing to exchange against each other, but only against some form of long-time intermediary—this discussion throws no light.

The problem of the relation of more liberal credit to the demand for goods, and of the relation of credit to speculative activity, and thereby to the general level of prices, is also really involved in the

loan must offer to the lender the promise of greater service to him than either of the other two methods open to him—consumption and personal exploitation.

To the borrower likewise the question will present itself

discussion. According to the usual view of the relations between demand and supply of products, demand and supply being regarded as merely different aspects of the same aggregate of goods, it is difficult to see how credit can be conceived, relatively to supply, as an increased demand or as an increase in the total volume of purchasing power. In this view of the case, expanding credit could have no bearing upon prices, no matter what might or might not be the effect upon interest rates—relations between present and future—excepting as, through the use of credit as substitute for money, the money commodity is in effect made greater in supply.

But if credit be regarded as expressing some modification in social attitude toward present goods and present consumption as against the future—an emphasis upon the present, with an enlarged disposition to promise heavily against the future, in order to have in the present—the case takes on a new aspect. And really speculation is nothing but the desire to have now, on terms of promise against the future, with the hope, it is true, that the future by its larger prices will justify, in terms of price gain, the hurry of acquisition. It is, in last analysis, an emphasis upon present goods, through present purchasing power in terms of money, as against future money or money credits.

It is implied in all this, and needs be clearly accepted, that the purchasing power which is being offered against present goods is not at any time solely other present goods or the suspended purchasing power *into which they have been converted.* At all times future facts are a part of the present offer, and, as credit is varying in volume, are a fluctuating share in the total volume of offer. The granting of credit is really a method of making, out of putative future purchasing power, a present purchasing power; the business of discount banking is essentially nothing but the underwriting of these undertakings against the future. The present purchasing power thus created thereupon becomes a part of the present money, or money equivalent, offering itself as demand against present goods. Two effects are manifest: (1) a rise in the rate of interest, that is to say, more favorable terms for present purchasing power as against future purchasing power, the new initiative being with the offers of future purchasing power; (2) since future purchasing power is, through its credit representatives, functioning as currency, there comes about a modification in the exchange relations between the unit of currency and the commodities against which currency is being exchanged, that is to say, the level of prices is modified.

But to return to our specific question—the social bearing of an unusually marked disposition on the part of producers and sellers to refuse to exchange present goods against present goods and to demand in exchange deferred rights of purchase—money-cash, credits, or well-secured promises; it is clear enough that a generally lower price level must result; but is it at all clear that this change in price level must succeed in marketing the goods in exchange for other goods, to the

in terms purely of service, of utility; can he obtain such terms of interest charge as to provide, after payment of the principal and its agio, a surplus of advantage?

With the establishment of a money economy, the problem remains the same in essentials; the calculus is still one of balance of utility.

And in the more complicated industrial organization also, the entrepreneur is seeking a balance of utility for himself, although it is true that here the computation has to be worked out as the final summing-up and outcome of a series of market-price computations. The medium in all

result of terminating the glut, and without enforcing a restriction of production? Or is it rather true that otherwise than so far as the new price level modifies the prevailing psychological attitude toward consumption, there must be, for a time, an adequate market for only those goods ministering to the more primary classes of needs?

The period preceding crisis is one of extremely high aggregate and per-capita productiveness of goods; all productive energies have been fully employed, enterprise functioning at the extreme of pressure. The demonstration of this is convincingly found in the prevailingly high level of consumption; with every wage-earner there goes the full dinner pail. Among the laborers there is taking place a higher average consumption of clothing, of minor comforts, and of luxuries. Not only this, but the social production has been sufficiently large to permit, over and above immediate necessities, the acquisition of a goodly amount of durable consumption goods—more and better personal belongings, books, pictures, household furnishings. Meanwhile also, in the more distinctly capitalistic field, it will be found that the social productiveness has made it possible, through saving, that there be constructed miles and miles of new dwellings and of business blocks —new streets with grading, paving, and sewers, and generally the extension of all sorts of public improvement, and the development of all kinds of quasi-public utilities.

Of the farmer it can be said that never was his farm in better cultivation, his land so expensively and adequately drained and fenced, his herds so large, his barns so capacious or in so good repair, or his house so spacious or so well furnished. Turning to still more general conditions of accumulated wealth, it may be said that never were the factories so large or so well equipped with the different instruments and appliances of production; and never were the warehouses so large to receive the outpouring volumes of product. These prosperous years have, it is true, consumed largely out of their production, but at the same time it has been possible to construct and equip railroad systems spanning entire continents, and to have reequipped all the systems earlier constructed.

And how has it all been possible? Doubtless the ultimate explana- must be in the surpassing volume of production; but within this, and made possible by it, was the enormous volume of saving.

But how, under the existing economic organization, does this

the entrepreneur's computations remains a money medium; he must get money gain, but this in order finally to get the maximum of utility gain. He borrows present money against future money, or, more accurately, he borrows present purchasing power against the obligation of later payment according to the same standard. Hence the interest problem, as it presents itself in actual affairs, is the sale of present purchasing power, expressed in terms of the standard, against future purchasing power, expressed in like terms. As Galiani wrote a century and a half ago:

> Hence arise the kindred phenomena of exchange and interest, the one being an equation between money present and money distant in space . . . . in order to equalize the intrinsic value of the one or the other diminished by the lesser convenience or the greater danger. Interest is the same equation made between money present and money distant in time, time here operating in the same way as space.[3]

saving take place? Usually, as we have seen, through the restricted consumption of some individuals or classes in society, and the lending of this saved purchasing power—this loan fund—to others, mostly for the purposes of the creation of social capital.

It is, then, the need of new railroads, new factories, new appliances, and new equipment that has furnished, and that alone could furnish, the market for new savings and the possibility that these new savings could express themselves in an increasing social capitalization. It is indeed evident that, if savings will not capitalize into forms of intermediate social wealth, there can be no market outlet for the savings unless it be in consumption loans, that is, in class indebtedness, dubiously secured, or in government wastes and government wars.

We are, then, within reach of our conclusions: with the restriction of the disposition to consume, there is neither the market to absorb the productive output of society, nor even the market to employ the existing productive equipment; capitalization cannot take place; savings, in any considerable volume, become an impossibility because of no market for them; there is nothing for the case but a sharp restriction of the productive output of society. A temporary lowering in the standard of living takes place; meanwhile some tendency is manifest toward the displacement of labor through competing surplus-capital equipment, to the extent, that is, that the existing supplies of instrumental goods are adapted to serve in relation to labor rather as substitutionary than as complementary goods. In large part, however, it is true that the existing capital goods are rather complementary than substitutionary in their technological relation to labor, and that hereby labor receives employment so far as the capital itself is able to find employment.

[3] *Della Moneta*, Book V, chap. i, p. 243, quoted by Pantaleoni, *op. cit.*, p. 26. Pantaleoni, however, appears to be wrong in interpret-

The proposition that instrumental goods are productive in time needs no demonstration or elucidation, so far as concerns mere productivity by weight and tale; all instruments or agents of production—land and labor as well as machines and appliances—manifest their productivity only with time.

But here, as we have seen, two problems are presented: (1) How infer that this weight-and-tale productivity is also a value productivity? (2) Why, if value productivity attends the instrument with lapse of time, is this value increase not reflected back upon the value of this instrument and expressed as part of the present value—the value increase thus disappearing by this very fact of absorption?

1. Boehm-Bawerk's solution of this difficulty of proving concrete productivity to be value productivity, was merely to assert it as self-evident; there may, he admitted, be occasional cases where the increase in concrete product is more than offset by the effect of the increasing supply to depress the item price, but these cases are assumed—and thereupon declared—to be so far exceptional as to leave unimpaired the generalization that value increases with increasing supply.

But again the inquiry presents itself—is the problem after all a question of value? and if so, in what sense? For all possible entrepreneur purposes the outcome is substantially one of value increase, if only the later product exchanges for more money than did the earlier borrowed sum. It is, then, for entrepreneur purposes, necessary simply that the exchange power of money relatively to commodities in general have not changed; it must in such case be true that an increased number of items imports an increase in the aggregate price, *if only* the per-item price of the particular product has not *especially* suffered. If, then, the influence of technique, together with all other

ing this passage as reducing the whole question of interest to the cause of contingency; the aspect of lesser convenience might well be taken to include the deprivation of the use during the loan period.

co-operating influences bearing upon price, has been of a sort to leave the general price level undisturbed, a general increase in weight-and-tale output must attach a general price advance to the aggregate product. If there are exceptional industries where the aggregate price product suffers despite the increase in the number of items produced, there must thereby be a still more marked price productivity for the remaining industries in the aggregate. Failure to manifest price productivity is thereby proved to be exceptional, and basis is established for the only kind of value productivity which at all concerns the present problem—the explanation of interest-offering under entrepreneur production.

2. But why is the increase in price product not reflected back upon the price or value of the productive instrument itself, and expressed under the form of its increased present worth?

The first answer is that it is so reflected. Even though an instrumental good may also be capable of use as consumption good, it cannot serve in both capacities at one and the same time; the situation is one of alternatives. *As production good* the present worth is based solely upon the value of the future product, and is purely the resultant thereof. True, the cow may command $50 for immediate consumption as beef, or may bear a $50 value for dairy and breeding purposes; but either aspect excludes the other. In the aspect of productive instrument, then, our problem formulates itself as follows: Why is not a fifty-dollar cow now worth fifty-five dollars, if only it and its increase will at the end of the year be worth fifty-five dollars? And this is merely to ask, why will not the cow now exchange for more of other things, if at the end of a year it will so exchange? It is, perhaps, answer enough for present purposes to say that the cow has today exchange relations against other things all of which, in their aspect of present purchasing power, have this same potentiality of increase.

But it remains to ask, why have all present values the

same productivity in *rate* of increase? Some production goods appear to increase by only a fraction of themselves annually, cows, e. g., bringing forth young but once a year, while rabbits multiply ten or twelve times; and still other productive instruments bring forth some thirty and some sixty and some a hundred fold. Is the answer to be sought in the degree of dependence upon other productive influences—the attendant higher expense in getting, e. g., the rabbit increment upon the market—or in the land and labor and implement outlays of maturing the highly multiplying yield of grain? The facts, however, will hardly bear out this explanation; we shall rather have to refer ourselves to the greatly falling per-item price of the more readily multiplied commodities; we must invoke the principle that entrepreneurs and entrepreneur capital will direct themselves into these mathematically attractive enterprises, until, with lowering prices in connection with the collateral costs and burdens, the purely mathematical advantages are fully offset.

But even so, we have the necessity still before us to explain the general rate of price increment, that is, of time discount.

Is it enough for this to show that, through technological influences, present price has the power to grow, at the actual rate of increase, into future price? Does, then, the long-continuing fall in the rate of interest indicate a slowing-up in the rate of weight-and-tale reproductiveness of instrumental goods, despite all the technological advances of these later years? Why is the rate of increase as it is, and why as low as it is? There is a suggestion here that somehow all lines of production that are markedly instrumental in their technique, have so suffered a price fall in their respective products that the weight-and-tale productivity of the instruments has been more and more absorbed under the guise of rising compensations to the co-operating production costs, interest suffering, we will say, to the advantage of wages. And if so, why has this taken place

to the precise extent that recent facts disclose? Need it ever stop? What influences are setting the limit?

Let it be supposed to be today possible to foresee that each and every item of wealth in existence today will tomorrow, by its own inner necessity and activity, be represented by two similar items. To assert that the one item of today would have the same value or price as two items of tomorrow would have but one possible meaning. There is no reason why the exchange relations obtaining today between different commodities, or between commodities and money, should be in any wise different tomorrow; thus an item of today should buy the same amount of other items or of money as an item of tomorrow will buy tomorrow; there are merely two items tomorrow for every one of today; and two items of tomorrow must command of other commodities or of money twice as much as one item of today will command.

Thus any question of equality of value or of price between today's situation and that of tomorrow can refer only to the exchange relations which must come to exist between the one item of today and the two of tomorrow, both being expressed in terms of the same system of exchange values. These relations must then be stated either (1) in terms of the present system, so that tomorrow's two items are discounted at the rate of 50 per cent. into present price, the bank-discount manner of statement; or (2) that today's items draw interest at the rate of 100 per cent. in taking rank in tomorrow's system of price.

In either case, items are transferred from one price system into the other only by virtue of the principle of interest agio, time discount.

And in the case assumed, a case of no co-operating effort or pain or care, and of no outside instrumental co-operation—a case also in which all things, provisions, lands, machines, durable goods, everything, have doubled—the discount rate would be 50 per cent., or the interest rate 100 per cent.

But all this, while it may make clear the broad general principle and basis of time discount, leaves unsolved all the distributive difficulties inevitably to emerge as the various co-operating influences are found to have part in bringing about the increase in price product. And possibly enough we have some difficulties to consider in the very phenomenon of money price itself.[4]

[4] Because, in the discussions to follow, the emphasis upon price as the peculiar and leading, if not the exclusively important, aspect of value, will become increasingly pronounced, there appears to exist the logical requirement, if not the practical necessity, of including within any general discussion of value an examination of the nature of money and a study of the process of price adjustment. To omit this appears to assume either (1) that monetary theory is so far a field of its own with its own peculiar difficulties and problems, as to render monetary doctrine impracticable of discussion here, and as to enforce, for present purposes, the uncritical acceptance of the generally received doctrines; or (2) that monetary theory is, in its value aspects, so far at one with value theory in general, as reasonably to dispense with any special treatment.

But even were this second view adopted, some justification for the adoption of it could fairly be demanded. The truth, however, appears to lie with the first assumption, that the problem of price would, if entered upon here, lead us in many directions over-far afield. Little more, then, can in this place be attempted than a summary statement of the grounds appearing to justify this view.

The explanation for the relatively inelastic character of the money supply carries us over, on the one side, into the technology of gold production, and into the nature and degree of gold consumption; on the other side, into the peculiar nature of the demand for money, and thereby into the recognition that, as Marx has put it, "Gold, when a mere commodity, is not money" (*Das Capital,* Book I, chap. iii, sec. 2). But in the purely supply aspect of the problem, it is perhaps true that no great difficulty need be experienced.

It is on the demand side of the money-value investigation, and especially with reference to the nature and the basis of this demand, and with reference also to the interactions and adjustments between the demand for gold as commodity and the demand for gold as money, that monetary theory becomes at once difficult and controversial. Here credit influences present themselves for analysis—present, indeed, in the first instance, the problem whether they may not rightly rank rather as within the money-supply category than as within the demand-diminishing category. Here also the various quantity theories formulate themselves as issues—the relation and the reaction of credit on prices and of prices on credit, and the like.

On the whole, therefore, a theory of value need not stand or fall with a theory of price, nor need a theory of price especially concern itself with the broader and deeper problems of value in general. Gold-value price, *Geld-Preis,* is an independent subdivision of the broad

But we have not yet finished with the nearer-lying difficulties on the demand side of the interest equation. So much as this is already evident, that the preference for goods for present consumption, the abstinence or "perspective" influence, as well as the demand for present goods for purposes of industrial or commercial gain, and all the preferences that run toward present goods by reason

value field and claims its place as separate subdivision precisely because it has more than enough of difficulties of its own.

With this preamble of caution, of disclaimer, and of apology, some of the connections and some of the separations of value theory in general and price theory in particular may be noted.

To money in its aspect of general purchasing power, and as symbol and equivalent of consumption goods, the principle of falling utility applies as a fact of the individual experience. But as intermediate, not to consumption, but to exchange, the principle does not apply. The more or less of the exchange medium in the possession of any individual, and the more or less of the exchange medium in society, and the general level of prices in society, are each and all irrelevant to the advantages derivable by the individual from the opportunities offered by exchange; only goods in hand and goods wanted are essential. Thus, while, in a loose and general way, under the rich-man-poor-man comparison, the possessor of a large supply of any one commodity, or of commodities, or of purchasing power in general, may be said, as compared with the respective utilities offered to the possessor of the smaller supply, to hold at a low marginal utility, no comparison of this sort is possible for money as intermediate of exchange. The ratio relation between the things to be had and the things to be foregone in the application of purchasing power exists for both men, and is the same ratio of equality for all marginal applications of purchasing power, but the absolute volume of the utilities compared in the computation of buying and foregoing are not to be known by the fact of exchange or to be even vaguely inferred from it.

The principle that with any commodity successive increments of supply attach to lower and lower individual needs, and thus that, with each individual, successive increments of purchasing power afford per unit a smaller and smaller significance, and that thereby, in society as a whole, any increase in social dividend may be loosely and average-wise declared to take place only as subject to the law of falling marginal service, is in no part safely to be carried over into monetary discussion. The monetary need in society is not in general better served by greater supplies of media; a principle of no-utility rather than of diminishing utility applies to every increase of money supply; to society as a whole or in the average, it does not at all matter whether the level of prices be high or low—the supply of intermediates great or small.

Thus while with gold *as consumption good* the principle of

of the uncertainty of life and by reason of the danger of objective loss, and all the demands resting upon changing human conditions and needs, have each their several share in determining the interest-agio adjustment between demand and supply.

But it is now necessary to recur to the fact that capital-borrowing is not commonly a borrowing of instrumental

diminishing utility applies, an entirely different principle must be accepted for the *social* significance of increasing gold *as money.*

An increase in the general supply of purchasing power in society, as an attempted parallel to the effect upon the individual of an increase in his personal provision of purchasing power, could point to nothing in society but an increase in the total of goods to be exchanged —an increase in the aggregate demand and supply of products—and would thereby cease to be a monetary computation, in any other bearing than that of its relation to the quantity of *intermediate* purchasing power required by society.

The marked inelasticity of the demand for money, as compared with other market facts, traces back to the peculiar nature of the service which it characteristically renders, and leads in turn to the solution of some of the most controversial of the problems connected with monetary theory.

It is clear enough that division of labor is possible only upon terms of the possible exchange of products. Socially, then, an intermediate of exchange, a money, has all the significance that attaches to specialization of activity in society; for while a considerable degree of this interdependence by specialization could be worked out under a system of barter, it is, as we have already seen, at the same time clear that not a lack of any medium of exchange, but a multiplication of media, would characterize the barter economy; a money economy has arrived when the point is reached where one medium has come to be conventionally accepted in place of many media.

The demand, then, for exchange media, or in modern society for an exchange medium, has behind it all the forces derivative from the advantages of specialized industrial organization. For each individual the significance of money expresses itself in the advantage accruing to him through his own opportunity to do the thing to which circumstance and aptitude direct him; thus each exchange affords for him in some degree the advantage commonly designated as *quasi-rent.* The strenuous demand for an exchange medium finds, therefore, its explanation in the rent elements hidden in every transaction of trade. Thus all the advantages that accrue to individuals separately, and to society in the aggregate, through the assignment of tasks to faculty and to opportunity, and all the advantages attendant upon the law of increasing return, depend upon the existence of an exchange medium, and imperatively prescribe its exchange-permitting adequacy.

And this leads us to the recognition of another aspect in which money differs from any other commodity; other commodities have many and varied uses, and various grades of utility in each use; so

goods but of purchasing power; and this purchasing power, as we have seen, is directed, under entrepreneur supervision and discretion, into all sorts of gainful avenues of cost outlay—land-labor, industrial appliances, advertising, insurance, franchises, privileges, copyrights, patent rights, good-will, cutthroat competition, bribery, monopoly differentials of predation, etc. The competitive entre-

also of gold *as commodity;* but as money, all items perform the same function and perform it equally well; gold *as money* has only one utility and one grade of utility. So, with other commodities, the total utility of the stock is indefinitely more than the utility of the final item (if there ever really were a social marginal utility) times the number of items; with money the total utility is a simple product.

It follows also from the nature of the money service that the level of prices is, for this purpose, entirely unimportant; and it follows likewise that, whatever the money supply, the price level must adjust itself so as, in view of the volume of the money supply, to make possible the volume of exchanges to be effected. Restated, this means that, so far as production and the degree of productive specialization may be taken as constants, there can be no change in the general price level otherwise than through a change in the volume of exchange media. This statement could doubtless be equally well changed to read that, with the supply of media remaining constant, changes in the level of prices can come about only through a change in the volume of the demand for the exchange medium.

No detailed discussion will be needed here to show that credit as substitute for money may be treated either as an increase in the supply of money, or as a decrease in the demand for money. With this in mind, we are prepared for the further doctrine that a direct proportion holds between prices and the volume of exchange media; this, indeed, follows necessarily from the fact of the homogeneity of the demand, and from the practically inflexible and inelastic nature of this demand. If with a change in the demand for an exchange medium, and with an inelastic supply of the medium, there could be no adjustment by a change in the price level, the alternative would be an adaptation of the commercial and industrial organization of society, as dictated by the inadequacy of the supply of media. For it is once again to be noted that the demand is none of it of a nature to be retired by a change in the price level; only on terms of industrial disorganization and reorganization is this demand to be retired.

The quantity theory of money runs, at its crudest, that the quantity of money metal in existence—or in circulation—determines the price level. This is obviously incorrect; and it probably is also incorrect, if the proviso "other things being equal" be added. But the amended formula would hold *were there no use for the money metal other than the money use.* The inadequacy in the quantity theory, as commonly stated, is in its failure to allow for the influence of demands for the money metal other than the money demand, or in its assumption that the money use has somehow the power to dictate the bullion value in the non-monetary market. Opponents of the quantity

preneur concept of capital is the only one having relevancy here, purely because individual and not social productivity is the only productivity in question.

Not only this: but *the interest rate is determined in the purchase and sale market of the loan-fund form of capital. All the different demands for all the different present uses of all possible different kinds of present goods, and of rights to goods, express themselves as call for loan funds—unspecialized purchasing power. The supply of loan funds,* the origin and amount of which yet await in some part their explanation, *is the deferred-consumption volume turned into immediate and current purchasing power.*

The value of any instrument of production is the present worth of all the future incomes attributed to it, as computed under the time-discount rate established in the loan-fund market.[5]

theory are also prone to forget that there are two distinct demands—the money and the commodity demand, and to assume that the money value is a derivative from the value of the metal as established in the commodity market. But, in truth, both the industrial demand and the money demand concur in fixing the value which, supply being assumed, the money metal must bear. But it is none the less true that so much as is the exchange medium less so much the more must the exchange unit possess of purchasing power—that is, that so much the lower must be the price level. The quantity theory is then tenable in its assertion of proportionality, but fallacious in its tracing of the lines of causation.

There is, indeed, no warrant for believing that gold as money gets its value from gold as commodity—or the reverse. The value of iron for nails is not reflected to it from the stove demand, any more than the value of flour for pie-crust purposes is the determinant of the value of flour in all other culinary processes. In no intelligible sense, then, can the volume of money in any one country, or in the world, be said to fix prices, or prices be said to fix the volume of money; but both the level of prices and the local quantity of money are determined by the same influences, that is, are derivative from the world-level of the value of gold, as itself expressive of the adjustment between all the different demands for gold, on the one side, as over against all the supply of gold on the other side; and by virtue of this common derivation, the value of gold used as money and the volume of gold so used are bound rigidly together.

[5] Professor Irving Fisher's admirable treatise upon *The Rate of Interest* appears as the present work is passing through the press.

It will be remembered that Boehm-Bawerk defines interest as the premium commanded by present over future goods, and that he

No instrumental good—or, if one prefers the expression, no capital good—will be produced, unless the future

attributes this premium to three concurrent causes, (1) the perspective underestimate of the future, (2) a possible relative scarcity of present goods as compared with future goods, (3) the technological productivity of wealth with passing time.

Professor Fisher—following what is seemingly Professor Fetter's view—adopts as his thesis that only the first two of the three influences set up by Boehm-Bawerk are properly to be invoked in explanation of the interest phenomenon:

"It is the third circumstance—the so-called technical superiority of present over future goods—which we believe to contain essential error (p. 55). To abstract both the underestimate of the future and underprovision for the present is to abstract the *whole* basis of interest (p. 55). If we eliminate the 'other two circumstances' . . . . we eliminate entirely the superiority of present over future goods, and the supposed third circumstance of 'technical superiority' therefore turns out to be non-existent (p. 70). If we cast out from the agio theory Boehm-Bawerk's special feature, his alleged 'technical superiority of present goods,' the theory which remains is believed to be correct" (p. 74).

Professor Fisher is not, however, disposed to deny to productivity some bearing on the interest rate; but he insists that the influence of productivity is exerted solely through modifying the general situation within which postponement of consumption takes place; it brings about, that is, a new abstinence problem, and does this solely through modifying the relative supplies of present goods as over against future goods:

"It is also true, as Boehm-Bawerk has pointed out, that not only does a lower rate of interest tend to the choice of remoter returns, but that, contrariwise, the choice of remoter returns tends to check the fall in the rate of interest; the reason . . . . being that the choice of an income-stream relatively large in the future and small in the present tends to increase the relative valuation of present as compared with future income (p. 164).

"If any cause tends to lower the rate of interest, the immediate effect will be to put a premium on those income-streams the return from which is in the remote future. . . . . But the decision to choose such income-streams tends to prevent the very fall in the rate of interest which caused the choice. For by relatively oversupplying the future with income, and undersupplying the present, such uses as forestry will tend to raise the relative valuation of present over future income, and therefore also to raise the rate of interest (p. 175).

"Nature offers man, as one of her optional income-streams, the possibility of great future abundance at trifling present sacrifice. This option acts as a bribe to man to sacrifice present income for future, and this tends to make present income scarce and future income abundant, and hence also to create in his mind a preference for a unit of present over a unit of future income (p. 186).

"The effect in raising interest comes merely from the shifting

rents promised by it, when computed into present worth at the market rate of discount, equal, and thereby justify,

forward of the income-stream, which leaves the immediate income smaller than before, but compensates for this by a still greater increase afterwards. . . . . The rate of interest, for contracts connecting the periods of scarce income with those of plentiful income, tends so to be high (p. 199).

"The deferred increase is expected to yield a return on the immediate sacrifice at a rate sometimes far greater than the rate of interest. But this high rate of return on sacrifice to the exploiter of the newly discovered method of utilizing capital does not by itself fix the rate of interest at that level. On the contrary, the valuation of the property is immediately adjusted to the new conditions" (p. 199).

Thus we are to understand Fisher to assert that the use of any productive process or the use of any sort of productive wealth can exert an effect upon the rate of interest only through modifying the individual's estimate of the relative importance to him of present goods as against future goods. How shall the owner of an instrument of production, say, a farm, employ it—for farming? for forestry? for mining?

"In the case of optional income-streams, the particular choice depends upon the rate of interest (p. 145). The intensiveness of his farming is thus determined by the rate of interest (p. 157). The choice will fall on the option whose marginal rate of return on sacrifice, reckoned relatively to the neighboring option, is equal to the rate of interest (p. 158). Those investments which most promptly yield returns are formed first, and the less rapidly returning instruments are successively formed until the margin is reached which corresponds to the rate of interest. . . . . A certain decrease of present income will be accompanied by a certain increase in future income. The relation between the immediate decrease and the future increase will vary within a wide range, wherein the choice will fall at the point corresponding to the ruling rate of interest (p. 159). The intensity with which he will improve and cultivate his land is determined by the current rate of interest" (p. 161).

That this correctly sets forth the attitude and the computations of the individual operator is past question; but is there not at the same time some influence exerted to modify the rate of interest—and, if so, how? Does each productive instrument merely receive its value from an interest rate elsewhere and otherwise determined? Or do productive instruments themselves, as an aggregate, through the very fact of the productive opportunities which they offer, have an effect in determining that interest rate under which each is separately capitalized? And do new processes, inventions, and appliances somehow bear to affect the rate?

"All preference for present over future goods resolves itself, in the last anaysis, into a preference for early enjoyable income over late enjoyable income (p. 90). When any other goods than enjoyable income are considered, their values already imply a rate of interest. When we say that interest is the premium on the value of a

the requisite investment of present purchasing power. And likewise, as will be readily seen, any existing instru-

present house over that of a future house, we are apt to forget that the value of each house is itself based on a rate of interest. . . . . Both terms of the comparison involve the rate of interest. . . . . But when present *ultimate* income is compared with future *ultimate* income, the case is different, for the value of ultimate income involves no interest whatever (p. 91).

"The rate of interest expresses a price in the exchange between present and future goods. . . . . Time-preference is the central fact in the theory of interest" (p. 88).

True, "not only does a lower rate of interest tend to the choice of remoter returns, but, contrariwise, the choice of remoter returns tends to check the fall in the rate of interest" but the reason is stated as being "that the choice of an income-stream relatively large in the future and small in the present tends to increase the relative valuation of present as compared with future income" (p. 164).

Here, then, is the issue: Fisher does not dispute the doctrine of Boehm-Bawerk that the newly opened lands, newly invented appliances, newly devised methods, have a bearing to raise the rate of interest, but only that the productivity fact is a separate and independent cause of interest; he ascribes the influence of productivity solely to its effect upon the relative importance attached to present and future goods. Larger opportunities for profitable investment are presented as having ultimate bearing upon the rate, not by using up the supplies of capital or by increasing the volume of the demand for capital, but solely by limiting the present supplies of consumption goods at the same time with increasing the supplies of future goods,—and thereby increasing the premium of present goods over future goods:

"The lower the rate of interest, the better can the owner afford to keep his carriage in repair, and the higher the state of efficiency in which it and all other instruments will be kept. . . . . The very attempt . . . . tends in turn to increase the rate of interest; for every repair means a reduction in present income for the sake of future—a shifting forward in time of the income-stream—and this will cause a rise in the rate of interest (p. 195).

"The effect in raising interest comes merely from the shifting forward of the income stream, which leaves the immediate income smaller than before, but compensates for this by a greater income afterwards. . . . . The high rate of return on sacrifice to the exploiter of the newly discovered method of utilizing capital does not by itself fix the rate of interest at that level. On the contrary, the valuation of the property is immediately adjusted to the new conditions (p. 199).

"Since the invention will more than repay this cost . . . . the effect will be to decrease immediate and increase remote income for society as a whole. Borrowing and lending merely distribute the pressure upon those most willing to bear it; but the effect is . . . . to cause a temporary depression followed by an ascent in the income-

ment, whether land or other, the upkeep of which costs more in newly invested or in reinvested purchasing power

stream, and therefore to increase somewhat the rate of time-preference and the rate of interest (p. 200).

"Society . . . . directs its labor to great engineering enterprises . . . . which cannot be in to contribute a return in enjoyable income for many years. In contemplation, future income, during this period, is relatively plentiful, and in consequence of these 'great expectations,' the rate of interest will be high" (p 203).

There is, then, it will be noted, no denial made by Fisher that the productivity of wealth has an effect upon interest rates—that it is a cause—but only a denial that it is a separate and independent cause. The issue is, then, only as to the sense in which it is a cause, and as to the method of its action: if one shifts a weight from one side of the scales to the other, the tipping of the scales may certainly be said to be caused by the shifting of the weight,—but it may also be rightly asserted that this is only through the disturbance of the relation between the two weights. And by reasoning precisely parallel it has been said that a new supply of any commodity has no effect upon price, simply because—once the supply is present—the adjustment becomes purely a matter of the nature and volume of the demand.

If this, then, is really the issue, one might stop to ask himself, what of it—supposing it all to be true; is the issue really worth while?

But is it all, indeed, true? Could not the reproductive power of wealth establish an interest rate even "if we eliminate the other two circumstances"? After all, is "the supposed third circumstance non-existent"? Is it true that "the imagined third circumstance . . . . is only the first two circumstances in disguise"?

Surely, (1) the perspective underestimate of the future may suffice to place a premium on present goods: and surely also (2) the relative scarcity of present goods as compared with future goods would also equally well suffice to bring about this premium: but how about the reproductive power of capitalistic processes as an independent cause?

Let it be assumed, as an extreme test case, that present needs and desires are so far weak or so far satiated as to approach the limit of non-existence or of disappearance,—a situation in which, by the very terms of the assumption, there can be neither any "prospective underestimate" of the future, nor any degree of inadequacy in "present provision,"—there being in fact no desire for present consumables, but only a clear appreciation of the certainty of tomorrow's need. If now it be clear that, for each unit of the existing wealth of today, there may by tomorrow be derived two units for tomorrow's consumption,—is it not certain that there will forthwith set in a vigorous competitive bidding for control of the present facts offering a command of tomorrow's consumable goods, and that there must result an interest rate approximating to 100 per cent. per day?

It is extremely difficult to decide how far and in what sense

than the present worth of the future increased returns which are attributable to the upkeep to be applied, will

Fisher concurs in Boehm-Bawerk's assumption that comparison is possible in competitive society between *goods* in the present and *goods* in the future. Most of Fisher's analysis proceeds upon the implied assumption of this possibility: "Could it always be assumed that the monetary standard was invariable in value with reference to all goods, the rate of interest reckoned in money would be the same as though it were reckoned in terms of the goods themselves" (p. 78). But even were it accepted that the comparison is possible, Professor Clark long ago made it clear that in the market transactions of a competitive society the comparison does not actually take place. And it is equally clear also that neither borrowing nor paying commonly takes place in terms of any concrete goods—whether farms or machines or raw materials or consumables. The borrowing runs in terms of present purchasing power according to the established money standard; and the future settlement is agreed to be worked out in like terms. The contract and all the operations under it sound purely in terms of price, precisely as the gain in contemplation by the entrepreneur is computed as nothing else than a balance in terms of price. And no other computation is of the slightest significance to him—unless, possibly, as somehow derivative from the price gain which he is engaged in seeking. The interest problem is, then, not one of surplus value, or of surplus consumption goods, or of surplus future income, but only of surplus price. Only so far as surplus goods bring surplus price can surplus product of any sort stand as relevant to the computation.

For the purposes of the interest problem, therefore, anything is productive which, in the actual situation of the entrepreneur, makes for a price-increment for him. The computation has to do solely with productivity as interpreted from the individual-acquisitive point of view. The borrowing is of a fund of purchasing power. This purchasing power may, truly, be directed into machinery, farms, or raw materials,—into lines, that is to say, of technological and social productivity,—but so, equally well, may it not. Instead, it may go into buying the right to levy taxes, or to enjoy a monopoly, or otherwise to plunder society; or the borrowed fund may be invested in bribing the city council to grant a desirable franchise,—or into advertising expenditure, as a process of indoctrinating the public with profit-rendering Hop-Bitters or Peruna misinformation. In any case, if the adventure promise a return in price-increment, it will contribute to the demand for loanable funds, and, as based upon it, there may emerge an interest rate.

And from aspects of distributive theory mostly to be presented later (see chap. xxvi), something may now be deduced for the purposes of the interest problem. Even where the borrowed funds are used by the entrepreneur in the purchase or hire of instruments of production, his problem remains precisely the same problem of how to get out of the future price-result a price balance over the price outlay. Enough of purchasing power must be advanced for labor to divert it from ministry to other demands—whether the consumption demand or the demand of some competitor,—enough for machines to get them

fail of receiving the upkeep:[6] The degree of improvement depends upon the rate of interest.

And now what shall be said of the view especially championed by Wieser, that for a complete theory of inter-

produced for the purpose,—and enough for land to command its service; and in connection with this investment there goes the entrepreneur's own activity of supervision and co-operation. When the time arrives for computing the gains upon the adventure, there is no way of attributing a certain quantum or proportion of the price result to the labor hired, or to the funds advanced for the labor, or any certain other amount to the machinery hired, or any third amount to the land employed; nor is it possible even to attribute any certain sum of acquisitive productivity to the aggregate of the borrowed funds. All that the entrepreneur can know is that by employing the borrowed funds or their proceeds in connection with his own activity, and very possibly also in connection with funds or instruments of his own, this new borrowing could be made so to signify to him in terms of price-increment as to justify the promise to pay a price-interest increment. The rate of time discount, therefore, is a rate fixed and determined in the loan-fund market; all properties—instrumental or other—that command a hire receive a value through the application of this interest rate to the computation of the present worth of these hires.

[6] Classical doctrine teaches that the payment of land rent does not condition the existence or the maintenance of the land as productive instrument; the rental payment having thus no bearing upon the supply of instruments, can have no significance for the supply of products, and thus no significance for the value of those products; rent is thus held to be a price-determined fact—a result rather than a cause,—a distributive share which is not at the same time a cost, in that sense in which the other distributive shares are costs.

Marshall faced and accepted the logically necessary inference that no hire of any produced instrument of production can be regarded as a price-determining cost, excepting under a time computation long enough to allow a change to take place in the supply of instruments, as the result of the divergence of compensation from cost; and that for short periods capital-goods rents must be treated as, for cost purposes, exactly like land rents.

We are not just now called upon either to accept or to reject this view, but only to examine the relations of land instruments and rental outlays to problems in the shifting and incidence of taxation.

It is clear that a tax shifts only so far as, by the imposition of the tax,—through its effect upon the relative supply of instruments, the relative costs of production, and the relative volumes of products exchanging against one another,—modifications are necessitated in the exchange relations in the market; shifting is a problem in value.

If, for example, certain kinds of productive instruments are taxed, or if capital investments in a certain line of production are taxed, a change in the supply of these instruments, or in the volume of capital investment, will be brought about; the redistribution of capital applications may be slow or may be rapid, according to the degree of mobility

est there is necessitated an investigation of the distribution-imputation process under which the rate of interest, together with all the other distributive shares accruing under the productive process, is supposed to be determined?

in the particular case; even if the instrument or other capital have no alternative application by immediate change of use, it is certain that with time, through the gradual process of wear-out and deprival of upkeep, the capital shifting is none the less inevitable; the supply of products must diminish with the progressive diminution in the supply of instruments; the result must express itself in an enhancement of price to consumers.

As to land, the traditionally accepted doctrine is excellently set forth by Carver in the following: "All goods excepting land are perishable and reproducible while land is not . . . . an important distinction, since this limits their value to something approximating their cost of production, whereas there is no such limit to the value of land. These distinctions are important because important conclusions as to public policy depend upon them. . . . . A tax on land, to take a single example, has a different effect from a tax on an article which is being produced, worn out, and reproduced by human effort. A tax on the latter class of articles has the effect of discouraging that effort and, consequently, of reducing the supply, whereas a tax on land does not affect the supply in the same way nor to the same degree."—*Distribution*, p. 129.

It is, however, clear enough that, if land values are subjected to a higher rate of tax than are other investments in productive instruments, a shifting of investment will take place as soon and as far as the nature of the case leaves it possible. The only questions are as to how soon and how far this possibility can manifest itself. It is clear also that in fertility aspects the original environment is capable of exhaustion in full parallel with produced instruments of production, and by the same method if upkeep is withheld. Practically all agricultural districts in New England testify to this fact; nothing about land is indestructible excepting its location.

It is apparent, then, that the "Single Taxers" have been grievously misled through an uncritical acceptance of the classical rent theory. They make shipwreck against the certainty that to subject the unearned increment to their tax program is inevitably to drive this unearned increment out of existence, or, more accurately, to force its transfer into a non-land form of holding—to render food and raw materials dear through the diminution of the social equipment for the supply of these goods.

But while, as applied to fertility differentials, all this appears to be past doubt, the argument as it applies to the mere fact of location, and to differentials of transportation, is not quite so satisfactory or so self-approving.

The truth is however, that unless fertility and location differentials are separately appraised and separately burdened in point of taxation, the tax upon location will have precisely the same effect to stimulate the exhaustion of fertility as if the tax were directly imposed upon the fertility. The land stands as a value aggregate of fertility and of transportation differentials; value will continue to be substracted from

Or what shall be said as to the proposition—perhaps commonly regarded as identical with the foregoing, and possibly rather intended by Wieser,—that a complete interest theory requires an investigation and elucidation of the distribution-imputation process under which the *rentals* and *hires* of the various classes of instrumental goods and agents are determined?

The replies must be as follows: for all co-operating—that is, complementary—production facts, whether machines of various sorts, laborers of various grades and kinds, lands of differing capacities and adaptations, patents, franchises, trade secrets—all such items as enter for the individual advantageously into the productive process, whether the product be hats, or shoes, or bonds, or salable notoriety, or marketable slander, or office, or place, or influence, or pictures, or acting, or preaching, for all of these gain-producing agencies there is everywhere the problem of the value distribution of the joint product—a problem too difficult to be entered upon here; *but this is not the interest problem;* it is the problem of rentals, hires, and wages, whenever paid, and without necessary reference to their possible reduction into a present worth.

Confining ourselves for the present to the observation that all of these rentals facts, if not of present payment, are themselves subject to the discount rendering into present worth, we turn to what is, for immediate purposes, the surpassingly important fact, that all these rentings, and hirings, and purchasings of instruments, or of labor, or of any possible sort of cost fact, enter into the cost computation of the entrepreneur solely under the capital denomi-

the land up to the limit that the "skinning" process can be carried—so long, that is, as by wear-out and refusal of upkeep, the slow marketing of the land by the process of exhaustion remains possible of further extension. Where, as with urban values, the land differential is entirely one of location, there is no serious theoretical impossibility in the single-tax program, if only the distinction between ground rent and improvement rent is faithfully observed. For precisely parallel reasons, it is imperative with agricultural land to preserve the distinction between differentials of location and differentials of fertility.

nator; but they nevertheless enter in two aspects: (1) according to the quantum of direct expense; (2) according to the time at which the expenditure is made relatively to the time of cash marketing. And this amounts to saying that *so far* as the expenses of production are technological in character and are to be ascribed to the mechanical factors in production, these expenses as capital charges are to be computed not in terms of rent, interest, wages, and profits, but of (1) instrument hires—rentals, (2) wages, (3) profits, and (4) time discount, interest, upon the particular outlays under consideration. But it is still to be kept in mind that these categories of cost, like the discarded categories, fall far short of including all cost outlays; and upon each of these other outlays, there is, or may be, an interest charge to compute as within the total of entrepreneur-capital cost.

For Crusoe the problem of balancing the protest against postponement of consumption against the advantages obtainable through postponement, could offer no great theoretical difficulty; the pressure of present desire must find in varying degree its justification or explanation, (1) in the prospect of relative plenty or want; (2) in the uncertainty of life; (3) in the prospect of greater or less intensity of life and desire, with the passing of the years; (4) in the sheer lack of capacity adequately to appreciate in the present the needs of the future—all these influences summing up to explain the relative estimate of present need to future need. On the objective side, there are the prospects and openings for productive employment, and the hazards of partial loss or total loss. The limit upon saving is at the point where advantages and disadvantages are regarded as at equilibrium.

In competitive society, the holder of wealth or of rights to wealth or of rights to service has not merely the three options open to Crusoe, to exploit, to hold, to consume; he has a fourth possibility, to lend; and from his personal

point of view, only the third option is to be regarded as non-productive; all the rest are productive ways of holding present wealth over for acquisitive ends. Whichever one of these three productive methods offers the highest inducements will be selected, provided only that it is of sufficient weight to overbalance the claims of immediate consumption.

On the side of borrowers a provision of present wealth or of present purchasing power may be desired either for purposes of consumption or of some sort of gainful employment of the borrowed fact. But for both borrowers and lenders, the problem, while worked out in terms of standard and of price, is in ultimate analysis a calculation of present utility against future utility: from no point of view is it, in any other sense than this price sense, a problem of value. The borrower, as producing entrepreneur, can pay an increase, reckoned in the price standard, if, by the aid of the loan, he can become able to put upon the market goods salable at an increase of price over what his product without the loan would have sold for; he cannot have the present purchasing power, or present wealth in terms of purchasing power, unless upon terms of this payment. The problem as thus restated is, then, precisely like any other problem of market price where buyers and sellers are many on both sides of the market, only that in the interest problem the point of price adjustment—the equilibrium point—is a rate per cent. Detailed analysis of the process by which this, or any other, price adjustment is reached, must be postponed to a later chapter (see chap. xxv).

But there still remains the difficulty of formulating the precise relation of technological productivity to the interest rate.

It has become sufficiently evident that technological productivity would alone suffice to explain the time-discount phenomenon; but so might also the "perspective" fact be sufficient, if only the demand for present consumption out-

ran the loan supplies derivative from the reverse perspective.

But, in point of fact, the saved purchasing power in society goes not solely to supply the entrepreneur demand; it directs itself sometimes into the immediate substituted consumption of the borrower; or results in the borrower's providing himself with increased durable consumption goods; or, again, in the financing of public improvements, or of deficits of administration; or, still again, in indebtedness for the wastes and orgies of war.

And even when the demand in question is an entrepreneur demand for entrepreneur capital, there is no warrant for supposing that in any case, all, or, in all cases, any of the borrowed funds must be devoted to the increase or even to the upkeep of instrumental goods. The quest of the entrepreneur is purely one of private gain; his ends may, it is true, be attained through socially productive activity, by contribution to the social dividend, but equally truly, and equally commonly, these ends are otherwise sought. Private acquisition is the only productivity involved. Merchandising of consumption goods is clearly enough, in present society, a socially productive activity, irrespective of all question of the degree of the productivity or of the possibly associated wastes; but it is not so clear that either the production or the underwriting or the merchandising of every sort of corporate stocks is as socially productive as it may be acquisitively gainful. So the uprearing of business goodwill through advertising, and the establishment of monopoly through the outlays and the temporary losses of cutthroat competition, are gainful investments of loan-fund capital. So the right to levy tolls is a capitalizable fact, and may be originally procured on terms of capital outlay. Interest rates may be in part supported, and might be entirely so, by the investment opportunity offered under the system of tax-farming, or by the sale of monopolies in foreign trade. Election contributions are often decided to be a profitable

line of investment of business capital. If by the mere power of size attaching to great aggregations of capital, the right of highway robbery, or of railway robbery, or of public-contracts robbery, could be controlled, a very considerable rate of interest agio might rule without any slightest taint or alloy of socially productive service in any capital use. Other distributive shares in society would doubtless have to pay for it all, but the revenues accruing to postponement would be none the less actual.

In point of fact, however, technological productivity has a part, and, it may be, quite the larger part, in accounting for business gain from the use of capital. But for theoretical purposes the only emphasis is upon the point that the question is one purely of entrepreneur gain through the possession of entrepreneur capital, and not at all of the particular method by which the gain is achieved.

Were it possible accurately or even approximately to determine in what degree the emergence of a commodity product at the end of its series of production and marketing processes is due to technological productivity, the relation of technological productivity to interest would be a deal clearer than it actually is. But that all the mechanical processes are completed leaves the commodity far from having been completely "produced;" all the various items of general-management cost, of taxation, of advertising, etc., remain to be computed; and under the actual conditions of business organization, a fairly definite proportion must be maintained between each of these lines of expenditure and the direct expenditure in concrete instrumental processes. The relation between these different lines of expenditure is that characteristic of interdependent complementary processes, no one of which is more imperatively required than any other; the process is an aggregate, a complex, and the share, which, as hire, the instrumental good derives from the result, is the share which entrepreneur competitive bidding attributes to it, in view of the effectiveness of the instrument in point of technique, of the nature of market

conditions and market methods, and of the relative attractiveness of other than technological lines of productive expenditure. Not far from two-thirds of the retail selling-price of coffee today is due to the expensiveness of the competitive methods of marketing.

Thus, were productive processes more markedly technological, the interest rates upon any given volume of capital employment might be higher; but it is, perhaps, equally true that the present volume of saving capital could hardly be employed, at the present level of development in technique, in purely technological lines; the widening field of investment in non-technological production processes explains in large part the elasticity and the extent of the demand for capital under present conditions, and explains also the fact that the interest rate has not come under the necessity of a greater fall.[7]

[7] Professor Veblen argues (*Theory of Business Enterprise,* chap. v) that the growing employment of credit by individuals and by business concerns, though it increases the volume of business in terms of price, cannot, in view of competition, increase appreciably, in the long run, the aggregate profits of business, and cannot appreciably enhance the aggregate industrial equipment or the aggregate industrial output; all competitors being compelled, through competition, to extend their use of credit, no advantage can accrue to them in the aggregate; the added funds not going appreciably to the provision of increased industrial equipment, the aggregate social product is not expanded; "all these advances go to increase the 'capital' of which business men have the disposal; but for the material purposes of industry, taken in the aggregate, they are purely fictitious items. . . . . Funds of whatever character are a pecuniary fact, not an industrial one; they serve the distribution of the control of industry, not its materially productive work." (P. 104.)

As to the tendency of the forces under consideration to bring about a progressive consolidation of enterprises, there need, seemingly, be little doubt; but that while the number of business units is decreasing there can be no appreciable increase in the per-unit profit is not so clear. But is there really an increased aggregate of credit, or is the fact simply that the larger organizations have merely displaced the smaller in the use of a practically unchanged volume of credit? Is there any reason to assume that the aggregate capital investment has, through credit, been increased, and this without corresponding increase of entrepreneur gains, and that, on the contrary, the enlarged employment of capital, without enlarging returns, has necessitated an actual fall in the interest rate, though possibly not a fall in the absolute quantity of interest outlay?

But for the most part, Veblen does not assert a fall in the rate

It will now be profitable to sum up these interest conclusions so far as they are of immediate relevancy to the course of the argument.

The discount rate, the interest agio, should, in analogy with all other cases of market adjustment, coincide approxi-

of *interest,* but only a decrease in the rate of profit, as computed upon the basis of the total business transacted by the entrepreneurs and upon the total volume of "capital" in hand, inclusive of credit extensions; and he appears to account for the larger employment of "capital" chiefly by the fact that the productive intermediates are enhanced in price through the competitive bidding of the competing entrepreneurs: "Loan credit . . . . taken in the aggregate serves only to widen the discrepancy between business capital and industrial equipment. So long as times are brisk this discrepancy ordinarily goes on widening through a progressive extension of credit. Funds obtained on credit are applied to extend the business; competing business men bid up the material items of industrial equipment by the use of funds so obtained; the value of the material items employed in industry advances; the aggregate of values employed in a given undertaking increases, with or without a physical increase of the industrial material engaged; but since an advance of credit rests on the collateral as expressed in terms of value, an enhanced value of the property affords a basis for a further extension of credit, and so on."—*Ibid.,* pp. 104, 105.

"The nominal magnitude (value) of the earnings is not increased in as large a ratio as that of the business capital. . . . . The funds obtained on credit are in great measure invested competitively in the same aggregate of material items that is already employed in industry apart from the use of loan credit, with the result that the same range of items of wealth are rated at a larger number of money units."—*Ibid.,* pp. 108, 109.

But in any case, the rate of interest does, after all, in Veblen's view, appear to be pushed toward fall through an overvaluation of the intermediate goods finally resulting from their constantly expanding market prices: "A manifest discrepancy presently arises . . . . between the aggregate nominal capital (capital plus loans) engaged in business, on the one hand, and the actual rate of earning capacity of this business capital, on the other hand" (p. 107). It is "unavoidable" that "credit expansion is in some degree 'abnormal' or 'excessive.' Such a use of credit does not add to the aggregate of industrially productive equipment, nor increase its material output of product, and therefore it does not add materially to the aggregate gross earnings obtained by the body of business men engaged in industry, as counted in material terms of wealth or of permanent values; it diminishes the aggregate net profits . . . . as counted in such terms, in that it requires them to pay interest, to creditors outside of the industrial process proper, on funds which, taken as an aggregate, represent no productive goods, and have no productive effect; there results an overrating of the aggregate capital, engaged in industry, compared with the value of the industrial equipment at the starting point, by

mately with some fact of marginal sacrifice; and so it does. Abstinence is here one of the items of cost in the sense that the present volume of saving, or some part of it, will take place only on terms of the present level of compensation. The cost of any supply item, be it remembered, is merely the money statement of the resistance to be overcome in order that the item in question shall offer itself

approximately the amount of the aggregate deposits and loans on collateral."—*Ibid.*, p. 112.

The fundamental error in all this—if error there be—rests in Professor Veblen's confusion of bank credit with loan fund.

We have already seen that the banking function is merely the underwriting of the customer's credit; banks do not lend their deposits; the very existence of this deposit liability is, indeed, the fact by virtue of which the bank is limited in its further underwriting activity. The bank does have an important influence in aiding the process by which loan funds, in the form of its deposit liabilities, come into existence; but the only possible lenders of these are the holders of them. The lending of them is a lending of suspended purchasing power; they are a part, and a very considerable part, of the great loan-fund supply. This aggregate loan-fund supply furnishes, in the modern business organization, the basis of the process through which private savings work out into social capitalization.

Mostly by means of the borrowing of loan-fund capital, and to small extent or not at all by appeal to bank credit, is the aggregate industrial equipment augmented. Short-time loans are not practicable for this purpose. Loan-fund borrowing is the true borrowing of "capital" in the business and financial sense. But it must be admitted that a goodly share of this typical capital flows, under entrepreneur management, into gainful processes—entrepreneur-wise viewed—that are not at all gainful as socially viewed—flows, for example, into all sorts of competitive expense for attracting trade, into extravagances of location, housing, and furnishings, into larger investment in salesmen, advertising, variety and size of stocks, and some of it, doubtless, into the competitive bidding up of the prices of the existing volume of intermediate goods, whether instruments or raw materials.

Bank borrowing, on the other hand, is a mere issuance of the bank guarantee, its indorsement, in support of the customer's undertaking to pay, otherwise non-current; this suretyship transaction is worked out under the guise and terminology of capital and interest methods.

This distinction between bank guarantee and ordinary loan-fund borrowing may well occasion perplexity. It is, indeed, true that the bank customer *may* use his bank balance, acquired by discount, precisely as he uses the bank deposit credit assigned to him by the loan-fund capitalist. The difference is in the fact that in substance the credit apparently advanced by the discounting bank is really advanced by the person who accepts the customer's undertaking as guaranteed by the bank, and upon this undertaking and guarantee makes advances to the bank customer. Credit is, it is true, here obtained by the borrowing customer, as truly as in the other type of loan, but it is a

upon the market. Thus many items of the capital supply may have no cost price; some saving would take place without pay; and it is possible that some part of each man's saving would not take place except for the pay. But in any case, each different volume of supply has its different

credit from some one other than the bank;' the bank stands as mere underwriter of the credit relation.

Thus under this form of credit obtained by the customer's extension, through the bank, of his own credit-borrowing activity, it is rarely practicable that the proceeds be invested in such long-time gainful directions as an increase of plant or as an enlargement of good-will and connections. The bank guarantee is of necessity a short-time relation, and from the point of view neither of the bank nor of the customer are its proceeds safely applicable to other than forms of wealth readily convertible into cash.

Thus the credit extended by vendors through the intermediary of bank guarantee resembles the credit extended through ordinary capital-lending, in this, that neither is a borrowing of capital from the bank; but differs in turn in this, that the bank-guarantee form can rarely serve the purposes of social productiveness or of any long-time gainful application, while the exact contrary is the fact with mortgage, bond, and preferred-stock credits.

But in whatever way, through credit, the entrepreneur is enabled to extend his operations, whether in increasing his material plant, or in purchasing desirable legislation, or in extending his good-will and connections, or in the increase of his holdings of marketable merchandise, there is much question as to the propriety of regarding any one of these uses of his own credit as an increase in his business *capital.* Admitting, then, that always "under the régime of competitive business . . . . credit expansion is in some degree 'abnormal' or 'excessive,'" it is to be accepted as inevitable that "there results an overrating of the aggregate capital engaged in industry, compared with the industrial equipment at the starting point, by approximately the amount of the aggregate deposits and loans on collateral?" (*Ibid.*, p. 112.) And is it true that the interest outlay for loans—bank or other—"diminishes the aggregate net profit obtained by the business men engaged in industry . . . . in that it requires them to pay interest, to creditors outside the industrial process proper, on funds which, taken as an aggregate, represent no production goods and have no productive effect"?

That much of the extended credit goes into socially non-productive channels is certain enough; but it is not so certain that the process is non-gainful in its effect upon the aggregate profits of the entrepreneur class as a whole; it may—and commonly does—result in a social waste of productive energy, and may yet be profitable to the aggregate entrepreneur interest.

But in any case the banker is paid, whether the service be or be not social; but paid for what? Here again the nature of the banking business must be firmly grasped; bankers are paid for making the customer's credit into present purchasing power; under the bank guar-

level of compensation at below which some part of the supply would not be forthcoming. But as with labor-pain cost, so with abstinence cost—no reduction to a common pain denominator is possible. The remuneration received is no *measure* of the pain undergone or even of the resistance overcome. The marginal postponement of consumption, like any other case of margins, is a ratio relation; any particular item of saving is marginal, not because of the high significance of the abstinence protest, but merely because the forces making

antee the customer's obligation becomes cash to the vendor of the desired goods. For this underwriting the customer pays to the bank, under the guise of interest, that which he would otherwise have had to pay to the vendor as real interest.

But at any rate, the mere power or opportunity or ability of the borrower to borrow is hardly to be regarded as capital, nor is the exercise of the power accurately an increase of *his* capital, whether or not that which is borrowed is, to the lender of it, capital goods, or loan-fund capital, or mere guarantee.

It is, however, beyond question that the fact that one is possessed of good credit—the ability to borrow and upon advantageous terms —is a source of gain to the possessor; why, then, not call *it* capital, and the return upon it a capital rent? The reason is that the fact of good credit is really not a possession at all in the ordinary case, but a part of the possessor—a purely subjective fact, as truly as any other aspect of personal power or skill or influence. True, it is an advantageous fact, a gainful attribute, but it is an attribute of the human being to whom it attaches, and in close analysis must receive a compensation under the category of profit in the strict sense of the term.

But if it really becomes possible, as it sometimes does, to make a separation of the credit from its personal basis and foundation—to give it an independent and external existence, and so, in some measure to transfer it, say, to a corporation to be organized—this credit may, in this non-attached form, become, so far as the transfer is really possible, a distinct capital fact and, like good-will and business connection, be capitalized for whatever, in the securities market, may be held to be the present worth of its income-earning capacity. The personal remuneration for the separated and transferred credit-attribute must in such case be received in block by the original possessor as the present worth of its putative future effectiveness for gain; and this putative earning power then becomes an asset of the grantee company, and may be as such capitalized like any other asset.

In case the credit attaches to a group of individuals, as to a partnership or association, and attaches to the grouping rather than to the separate individual members of the group, it would then seem preferable to regard the credit attribute as in its nature and origin a separate and objective fact, and as thus a part of the firm or association capital.

for present consumption, representative, it may be, of very great or of very limited present need, are at an approximate equilibrium against the estimates of the advantages promised by postponement.

But, on the level of the entrepreneur-cost analysis, none of this cost to the lender has direct significance for purposes of borrower's cost or for purposes of any cost investigation leading to the determination of the value of the product. What the entrepreneur has to pay is cost for him; lender's cost is relevant only from the point of view of explaining the causes of the situation under which, and as determined by which, entrepreneur cost has to be worked out. Just as entrepreneur cost is in no sense an employee cost of pain, but purely an entrepreneur computation, so such interest costs as are relevant to the cost-of-production category are not costs of abstinence to those who do the saving, but are costs of expenditure to those who do the borrowing.

This is evidently not to deny that the entrepreneur may himself have a postponement cost, as well as opportunity costs of other sorts, e. g., leisure and recreation, but the *saver's* postponement cost is not also a cost item in the entrepreneur reckoning; so again, when a borrower decides to consume the product of the loan rather than to use it reproductively, his choice in the direction of non-abstinence—his refusal of the cost burden of waiting—is his own, and not that of the saving lender; it is a new and distinct choice.

Thus, the "value of money" or of capital, as of labor or machinery or land, is a market fact, a price datum, which the entrepreneur takes as he finds it, without attempting any explanation, and without any call to make the attempt. Entrepreneur cost explains the price of the product only upon the basis and assumption of other established prices for the items of cost, which cost prices the entrepreneur-cost analysis in question is not concerned or competent to explain.

The discount rate also approximately coincides with some item of marginal demand; there is, as we shall later see, no very serious error in the doctrine that the interest rate reflects the marginal productivity of capital, if only the capital concept be interpreted widely enough and in the competitive, entrepreneur tenor, and if the notion of productivity be not socially but competitively conceived and be applied in a sufficiently extended sense. (See chap. xi.)

This interest discussion has gone far more deeply into the interest problem than the cost-of-production category has need for; but this was nevertheless necessary purely for the purpose of finding out what was really needed and what relation interest bears to entrepreneur cost. And so much as this becomes clear from our analysis, that within entrepreneur cost must be computed, not merely wages and the different rents of different productive agents, but also a time charge for the value fund in the entrepreneur employment, according to the length of time of this employment. That is to say, cost of production reckons, among other items of cost, like wages, taxes, rent on land, rent on capital goods, etc., an interest charge on the capital-fund investment.

And as will later more fully appear, interest, in the sense of time discount, must be recognized as a distributive share, precisely because it is a cost under the entrepreneur system of production and distribution; cost payments by the entrepreneur are distributive shares to the payees. It is not, however, to be inferred that every case of interest payment is a payment made as incidental to a productive process. There are interest revenues that are not derivative from the productive process, and are not to be regarded as distributive shares out of a produced value. Many cases fall purely and solely within what we may call the secondary distribution, as distinguished from the primary, the production distribution. (See chap. xxvi.)

CHAPTER XVI

RENT AND COST—MARGINAL COST—RELATIVE COST

John Stuart Mill, following out the implications of Ricardo's proportionment doctrine and recognizing that value is essentially relative, perceived that costs of production as bearing on value must likewise be relative, and thus that the exchange relation between different goods can be affected by only such causes as unequally affect the costs of different goods; and accepting also from Ricardo, and with approximately complete consciousness, the entrepreneur point of view, it became clear to Mill that, for a cost-of-production doctrine adequate and serviceable and consistent from this standpoint, cost, on the labor side, must be held to be not the labor and not the pain of the labor, but the wages paid for the labor; and it followed also that if, in a given line of employment, the efficiency is greater in the same proportion that the wages are higher, the relative wage cost is not affected.

And it thereupon followed that wages payments become relevant to value only in so far as one commodity requires, relatively to another, more labor or a more highly paid variety of labor: "Things . . . . which are made by skilled labor exchange for the produce of a much greater quantity of unskilled labor, for no reason but because the labor is more highly paid." [Mill's habit of regarding cost items as opaque and definitive facts.] "So wages do enter into value; the relative wages of the labor necessary for producing different commodities affect their value as much as the relative quantities of labor. . . . . The absolute wages paid have no effect upon value, but neither has the absolute quantity of labor."[1] However, since variations in wages are usually general, it is, Mill says, by

[1] *Principles of Political Economy,* Book III, chap. iv, sec. 3.

variations in the relative quantity of labor required in production that variations in value commonly come about.[2] Similarly also with interest and profit elements in cost; these charges are presented as affecting value only as they enter, in varying measure, into the costs of different commodities.

It is manifest that Mill is here treating cost consistently from the entrepreneur point of view; labor charges are conceived to enter the computation only as reduced to price-value homogeneity in the entrepreneur outlay,—an unquestionable fact which, by the way, has led some economists to the notion that labor is an abstract fund.[3]

Likewise with capital the entrepreneur reckoning holds, and this equally whether the question be one of interest charges on loan-fund borrowing, or of rentals paid for machinery, or of interest paid as a percentage rate upon the price expression of the machinery as a value fund—from which last method it has been by some economists inferred that capital is an abstract fund.

And precisely as these items of outlay for capital goods attain the homogeneity requisite for cost computations only by virtue of their reduction to the common denominator of price, so also, under the same reduction to terms of price, there enter into the cost reckoning minimum wages or profits of superintendence; from which fact it may sometimes be inferred that profit-receivers are also an abstract fund. And forthwith, these three separate factor funds having been successfully established, the logic of the case will compel their merger into one great and inclusive fund of abstract units of value productivity.

It results, then, from Mill's doctrine, that values are not proportionate to the labor applied, or to the capital applied; nor is the problem one of some sort of compound proportion of these, as Ricardo seems often upon the

[2] *Ibid.*

[3] For example, Marx, notoriously; see also Macfarlane, *Value and Distribution*, pp. 267, 270; Clark, *Distribution of Wealth*, chap. xi.

point of asserting. Instead of this, value reduces to a simple proportion based upon the price costs incurred, or, undoubtedly, if one prefers, to a compound proportion in which each and every outlay appears under the price denominator.

But if such was really Mill's doctrine, how came it about that rent outlays were excluded from cost? The answer is that Mill did not exclude them; he expressly admitted them:

> No one can deny that rent does sometimes enter into cost of production. If I buy or rent a piece of ground, and build a cloth manufactory upon it, the ground rent forms legitimately a part of my cost of production, which must be repaid by the product.[4]

Mill's view was, however, that rent outlays do not commonly enter into the *marginal* cost of production; and with Mill as with Ricardo, it was this marginal cost that was price-determining. The doctrine applies especially—and most clearly and most importantly—to agricultural products. "Rent forms no part of the cost of production which determines the value of agricultural products." [5]

This doctrine was obviously Ricardian, and needs no detailed restatement at this point. Ricardo placed rent out of connection with value, by getting it out of marginal cost. This marginal cost he found upon marginal land, rentless land. Nor need it especially matter if no rentless land were found; for there was always the intensive margin, and at this margin it was equally possible to isolate a product in the cost of production of which rent could have no part; this product would therefore function as the marginal product, a product produced, if not upon marginal land, yet upon the rentless margin of rent-bearing land. And thus if (1) marginal cost could be identified with cost upon marginal land, and then (2) this marginal land could be accepted as the price-determining influence in cost, the Ricardian case

[4] Mill, *op. cit.*, Book III, chap. iv, sec. 6.
[5] *Ibid.*, chap. v, sec. 2.

was established. With rent excluded, and with capital reduced to the labor denominator, value became proportional to labor content.

But these two important steps in the argument were merely taken for granted—assumed out of hand—perhaps by title of their sheer reasonableness. At all events, these two propositions present the problems next awaiting examination at our hands: (1) Is the cost margin an instrument margin? (2) And in what sense, if any, is one item of supply more price-determining than any other?

(1) Is the cost margin a land margin? It is significant upon this point to notice that for non-agricultural industries the trend of authority appeals rather to the marginal entrepreneur. Mill's reasoning itself looks in this direction, and Walker—no matter how badly his marginal entrepreneur was selected—stands distinctly for the view that marginal cost is cost at the personal margin; and so with most other writers. And evidently there must be a cultivator upon marginal land. Perhaps a sympathetic interpretation might harmonize the old with the newer doctrine, by taking Ricardo to have regarded the cultivator as marginal because on marginal land. But if so, we must likewise regard as marginal that cultivator who is getting on somehow with machinery, part or all of which is worthless—marginal capital goods; it would perhaps be as promising a quest to hunt for no-interest or no-wage production as for no-rent production. Evidently labor and capital may be applied upon no-rent land—no land, but it is equally true, and perhaps more common, that worthless machinery,—no-interest capital goods, that is, no capital,—is combined with land and labor, or that worthless labor, child, pauper, invalid, or convict, is combined with capital and land. And it has been many times pointed out that the Ricardian doctrine must thereupon logically exclude wages and interest from value-determining cost.

And, going over to the intensive margin,[6] for a really workable land margin, it should be immediately evident that capital instruments applied on marginal land, or upon any other land, are, or may be, supplied with labor to the point where only the labor is remunerated in additional product; whereby, by parallel argument, only wages are left as cost. And it is evident also that every holding of land, if rationally handled, receives expense outlay to the point where, in the circumstances of each respective cultivator, no further outlay is expedient in view of the further remuneration. That is to say, the intensive margin is to be found on all land, and with most, if not with all, capital instruments.

And, finally, this land-margin view must face the difficulty, already sufficiently elaborated, that the entrepreneur in his borrowing does not borrow land or capital or labor, but only purchasing power, and follows a most catholic system of interchange and substitution among the various productive factors.

But whether or not this land-margin cost doctrine needs abandonment forthwith, the entrepreneur margin being accepted in place of it, it is at all events clear that even upon marginal land there must be an entrepreneur, and that the land is marginal only as related to him and to his separate labor and equipment. It is not absolutely necessary, indeed, that wage or implement outlays be undertaken by him; if he can get along with valueless land, he may quite as reasonably do as much and as well with scrap-pile tools. But however this may be, it is certain that no piece of land and no item of implement wealth can ever be abandoned as unproductive, or be appraised as precisely on the line between use and non-use, excepting as the expression of a human choice, a fact in the psychology of some entrepreneur, his judgment as to the adaptability of a means of production to his needs as an independent producer.

[6] Cf. Hollander, *Quarterly Journal of Economics*, January, 1893.

A further argument in defense of the Ricardian doctrine needs at this point to be again called to mind. It is urged that rent outlays upon the better land ought not to rank as cost items, since, for whatever is differentially expended in rent, a precisely equivalent differential of advantage is obtained; the better lands are no dearer, and no cheaper, at the higher rent than are the poorer lands at the lower rent; the more rent payment, the more land service, and the correspondingly larger product:

> It is true that all tenant farmers and many other classes of producers, pay rent. But . . . . whoever cultivates land, paying a rent for it, gets in return for his rent an instrument of superior power to other instruments of the same kind for which no rent is paid. The superiority of the instrument is in exact proportion to the rent paid for it. . . . . The real expenses of production are thus incurred on the worst land. . . . . Whoever does pay rent gets back its full value in extra advantage, and the rent which he pays does not place him in a worse position than, but only in the same position as, his fellow producer who pays no rent, but whose instrument is one of inferior efficiency.[7]

It only needs be suggested that this argument really abandons the land-margin and accepts the entrepreneur-analysis point of view, and, so far as it is valid for any purpose, goes to prove that the costs of production are equal upon all lands, and therefore that all lands are equally marginal,—an argument reinforcing and supplementing the point lately made that for every farm and with every farmer there is an intensive margin.

But some still more perplexing conclusions appear to follow from Mill's argument, if it is accepted—conclusions that may well call for lengthy consideration, since, with its acceptance, there will be rendered necessary a fundamental revision of an entire series of important theoretical doctrines.

If, from that sort or aspect of cost which is to be regarded as price-determining, rent is to be excluded by

[7] Mill, *op. cit.*, Book II, chap. xvi, sec. 6.

virtue of the fact that, for whatever increase of expense is made by renting the better land, a corresponding advantage of opportunity is secured and a corresponding increase of marketable product obtained, it will directly follow that interest paid for the control of larger capital, or higher wages paid for a better grade of efficiency, or for a larger force of employees, must by parallel argument be excluded from value-determining cost.

That there is an inviting quality in this conclusion, despite the seeming paradox and absurdity of it, may be in part inferred from the fact that, as will later appear, some of the Austrian school have, on entirely independent reasonings, arrived at it.[8] Mill's doctrine, outlined a few

[8] The following résumé of Pierson's cost doctrine (Dr. N. G. Pierson, *Principles of Economics*, translated from the Dutch by A. A. Wotzel, Macmillan, 1902) will be of service as throwing some light upon the later trend of cost doctrine with the Austrian school. The interests of space must stand as excuse for the more or less chaotic fashion of quotation and comment in the following; when words other than those of Pierson—as translated—are used, or when comments are interpolated, brackets will so indicate:

"In the language of every day, cost price indicates the sum total of the disbursements which an entrepreneur has to make in order that he may procure a given quantity of commodities. . . . . This is the only fact that possesses interest for him when he wants to know the cost price of his products. But the economist, when he is considering the conditions for promoting the welfare of society as a whole, has to be careful not to view things from the standpoint of the entrepreneur. Under no circumstances may he place wages on the same footing with fuel and fodder as part of the cost (p. 62). [Surely there are here two distinct points of view, and each for its purpose is worthy of consideration; but it has yet to be shown that, in an investigation of value in a competitive society, we may safely abandon the competitive reckoning and adopt the social point of view.] . . . . Let us imagine a number of persons united in a co-operative society. . . . . One contributes capital and land; another his knowledge; a third his muscular strength, and so on. . . . . Now as to cost: many have had to draw something on account in the course of the year. . . . . Are these disbursements part of the cost? Certainly not: they are portions of the jointly acquired income resulting from the enterprise. The only items that can be reckoned as costs are: corn used for sowing, live stock that has perished [etc.]. [This notion that cost can in no case cover alternative income has this fault at least, that it gives no notion or measure of the influences that serve as counter-inducement against the production of the product in question. As Crusoe must reckon a displacement cost, a disadvantage by foregoing—opportunity cost—so must society face a precisely similar cost in the alternative

pages back, that value is affected only by relatively high wages, or by relatively high interest outlays, or—and here the interpretation is less confidently made—by relatively high rental burdens, has the same logical trend and must pass for something more than a mere analogy.

Taking note that the inquiry at its present stage engages us in a quest for personal margins, rather than for instrument margins, let us ask ourselves what cost influences are of the sort to make one producer marginal as against another, that is, what costs are margin-determining costs.

It is evident that a fall in demand, expressing itself in

applications of social productive power.] Let us now modify our hypothesis: The workers . . . . demand a fixed wage in lieu of weekly payments on account, and the landowners demand a fixed rent. The result of this is that the enterprise loses its co-operative character, as the risk will, in future, be borne by certain members of the society only. But this does not change the economic character of what the workers and the landowners receive. That which is paid them consists still . . . . of products of the enterprise (p. 62). [This is the social point of view at the extreme of statement. The truth seems to be that, precisely because the co-operative character has been lost and the enterprise has come to be conducted for individual profits, there has come to be someone to reckon these wage and rental outlays as cost. True the wages and the rent are incomes derived, as all incomes must be derived, from product, but that which is income to laborer or landlord may be none the less cost to the employer or the tenant. And it is precisely for this reason that the investigation of costs and of their relations to value, is at the same time an investigation of distribution.]

"We see that what the entrepreneur regards as the cost price of his products is a very mixed sum. It certainly includes what would be the cost in the narrower or social sense; but . . . . generally the greater part . . . . consists of income and nothing else. . . . . The entrepreneur has every right to reckon all these prearranged disbursements as part of his cost; but we know very well, and so does he, that they only make up the sum which he must pay out of the income he earns as recompense for the assistance afforded him in earning it (p. 63). [There is surely no room for difference of opinion here, excepting as to the question whether, in a competitive society, the costs of competitors are the costs with which an investigation of value is concerned, and whether in fact the other concept of cost, the social concept, has any relevancy to the problem in hand.] The greatest confusion of thought arises from a failure to observe the distinction between cost from the point of view of the entrepreneur and cost from the point of view of society as a whole (p. 63).

"We now return to the question, What is the price that mankind

the falling price of some one product, must drive some producers into other lines of production; but which producers? Only such product will continue to come upon the market as can be produced at this lower price; the price will still be commensurate with the costs of that producer who now stands as marginal under the new conditions; but would this fall in price be selective, or be influential in any degree, in determining which producer should be marginal? And so with all the outlays of production; each producer faces the same external conditions of production, the same wages and rent and interest levels; these burdens are common to all the com-

has to pay for the things that it needs? The price consists not of wages, but of labor; not of interest or capital, but of the using of capital; not of profit, but of care of management (p. 64). [What of rent, or of the use of land? Does this go or not go with interest or the use of capital? And only a little while ago it appeared that the co-operative society had no costs other than the consumed material of agents. Perhaps it is important that Pierson asks here, What is the *price*—there, What was the *cost?*] Wages, interest, and profit, speaking in the social sense, are not parts of the cost of production; they are parts of what is produced. They are not things sacrificed, but things gained (p. 64). [But note that labor, as distinguished from wages, and the uses of agents are still called the *prices* of product, though it is perhaps not clear whether or not they are *costs.*] . . . . If we want to ascertain the net as distinct from the gross income of society . . . . we need only deduct what has been spent for the purpose of replacing and maintaining commodities which have been wholly or partially destroyed in the process of production itself. But in their turn these commodities are the fruits of labor, and so we arrive at the conclusion that labor, the trouble of production, is the sole price which mankind pays in order to procure such things as it deems to be necessary. That is to say, the only *positive* price; for there is also a *negative* price, if such an expression be permissible. The negative price consists in absence from present enjoyment. . . . . It is . . . . a sacrifice made by those who practice it; a price, a negative price, if we must so call it, paid by man in order to obtain the commodities which he desires to possess (p. 64). [But this, one fancies, is not intended to make *interest* a cost; and the uses of capital have been reckoned once as "the price which mankind has to pay for the things it needs;" now the sacrifice of absence in accumulating and holding capital comes in somehow, seemingly as a new cost, but a cost in the negative sense. The reconciliation must be found in some difference of meaning between *cost* and *price.* But all the while, what about land and the compensation for not wearing it out—for applying the expenses of upkeep? Abstinence certainly obtains here if anywhere. Is land regarded as capital and are its uses parallel to uses of capital, which latter are ranked as part of "mankind's price"? At any rate,

petitors in the field; why then is any producer marginal? It is true that for such industries as are distinctly capitalistic, or distinctly land-using in their technique, or distinctly wage-paying, there will follow, in case of changes in wage or interest or rent levels, marked effects upon the relative volumes of products, and upon the relative prices of products. But the question again presents itself, are not all competitors equally subject to these conditions? What influences select the marginal man, the price-determining man, so called?

That one man is marginal as against another must, it seems, be due to such peculiarities in him, or in his circum-

it is to be remembered that some of the land is not the result of labor, while, as certainly, some of it is. This seems likely to make trouble for "the conclusion that labor is the sole price that mankind pays, etc." But inasmuch as the concept of price, whether it mean the same thing as cost price or not, is a social concept, and therefore has, in a competitive society, little, if anything, to do with value, it perhaps does not greatly matter what relation to the case rent and land and land uses may hold.]

"Not only do the expressions value and cost price [cost price meaning labor and abstinence] differ widely in meaning, but the one actually means the reverse of the other. Nevertheless . . . . the relation between the value of things in most cases corresponds pretty nearly to the relation between the respective cost prices. [This sounds Ricardian, but it is not; for] How is this to be explained? The reason is that everyone prefers to apply his labor to the production of such things as will afford him the greatest amount of enjoyment. Value is the regulatrix, so to speak, of labor. It determines the direction in which, ... the objects to which, labor shall be applied. Speaking very broadly, every kind of labor will be continued up to the point at which it becomes as remunerative as any other kind of labor. [And one would infer that it will be continued only so far; but of course this is simply awkwardness of expression. The real significance of the principle would be better brought out, were it said that labor will not be continued in one direction when it becomes less remunerative than in any other direction, that is, than the same labor in a different employment; but this would have implied and almost imposed the notion of a displacement, a sacrifice or opportunity cost. And note that the phrase *less remunerative* or *as remunerative* is not quite accurate; *less attractive*, all things, including remunerations, being considered, would adequately cover the case.] As a result of this, most commodities automatically acquire a certain value in relation of each other, which corresponds approximately to the proportion between their respective costs in labor (p. 65). [This doctrine of choice between the alternative applications of the productive powers at one's disposal must logically include costs, not merely in labor, but in capital and land.] An example may serve to make this

stances, as render his relation to the market situation a peculiar relation. And this is not to deny that there are lands especially adapted to particular lines of production and thereby especially subject to change in cultivation with changes in market levels. But that under a particular cultivator, these lands are especially liable to change in use, must rest with the peculiar tastes, abilities, or situation of the particular cultivator.

Nor does this view at all deny that rent, interest, and wage outlays are costs; clearly they are costs; no issue is offered upon this point. But are they those parts of cost by virtue of which one individual becomes marginal as against another? Margin-determining influences—the

clear. Suppose that in a certain country it requires exactly the same effort to produce half a ton of wheat as it requires to produce a ton of rye. The proportion in which the cost price of wheat stands to that of rye will therefore be as 2:1 (p. 65). [The example raises more difficulties than it clears up; for evidently we are not now talking of any one man's choice as to how he shall apply his productive forces and agents, in which case labor and value products might be assumed to be proportional; but we are talking of society and of market values; it therefore becomes impossible to assert that, country-wide and for different men, wheat takes twice as much labor as rye, unless upon the assumption of some sort of jellification, both of labor and of land,—some reduction in value denominator or otherwise, to homogeneous quantities.] . . . .

"The value of things, as some people put it, *depends upon* or is *determined by* their cost of production. . . . . However . . . . things do not derive value from the fact that they have cost labor; labor has been expended upon them *because* they have value. [This leaves the quantum of resistance, the forces limiting supply, still to be explained, which explanation cannot, in terms of utility or value, be accomplished, excepting as expressed in the pull upon labor (and upon *land* and *capital*) exerted by the other values alternatively possible; and this reinstates the doctrine of costs, under the form of sacrifice, displacement, opportunity foregone.] The value of commodities is not determined by the amount of exertion involved in their production, but by the amount of inconvenience arising from our being deprived of them. [Here again is utility asserted not merely as primary, which it is, but as exclusive of cost, which it is not; since cost and alternative utilities or values are—often, at least—one and the same.] Instead, therefore, of saying that the values of things *depend* upon their cost of production [labor cost], let us rather say that the value of commodities . . . . must, in the long run, coincide with their respective costs of production (p. 66). [All of which would be satisfactory to any cost-of-production theorist, were it not for the distinctly labor-cost implications and emphasis.] . . . ."

decisive variants in the situation—are found in the ability or lack of ability to buy closely, hire cheaply, organize economically, sell skilfully, or in the degree of aptitude or preference for some other line of production. That is to say, cost as a margin determinant is purely a matter within the personal aspects of entrepreneurship, a managerial fact, a subjective phenomenon, in which all the influences bearing upon the psychology of choice between different occupations or between occupation and leisure have their place.

This leads us back to the second part of our inquiry: Of what significance is the marginal instrument or the marginal producer, when once one is found? *In what sense, if any, is one item of supply more price-determining than any other?* For, after all, all investigations on the cost side of the value equation are important only as bearing upon the question of the supply, and all our talk of margins serves only the purpose of explaining supply fluctuations. It is true that only by the close analysis of what is characteristic in marginal relations does the ready and sensitive response of supply and demand and value to the changing conditions of production become intelligible. But it remains true that market value is the equation point between the whole volume of supply over against the whole volume of demand. Each and every item of supply has its small share of influence upon the market outcome. "The withdrawal of iron from any one of its necessary uses would have just the same influence on its value as the withdrawal from its marginal use." [9] The marginal item whether of demand or of supply differs from any other item only that through it, as marginal increment, a determination may be reached as to just what effect it, or any other single item, has had upon the price adjustment, measurement being made from the point at which all the other

[9] Marshall, *Principles of Economics,* 4th ed., p. 580, note.

forces in the market would otherwise have left the price. Not to the soldier who fires the last gun is the victory to be accounted, nor is the smallest boy who touches off a fire-cracker to be held responsible for the entire Fourth of July hubbub. If there is accurately a producer upon the margin, the market price must coincide with his cost; but neither the point of adjustment nor the producer at this point is the determinant of price. True it is that if he were not in the case, the price would have been other; but so is this true of all the other producers respectively. The marginal item of supply is one among the whole number of items and, as such, has its part in the resulting adjustment, but it is the entire supply in equilibrium with the entire demand that gives the market adjustment. It is true that the added weight of the marginal item has, in strict theory, moved the price from one point to another, but the basis upon which this effect is worked and the situation which it modifies are the results of thousands of other units of supply in face of thousands of offers.

At the most, then, price is to be understood not as fixed by marginal cost but as commensurate with marginal cost. Who shall produce or who withdraw is for the most part a result of price, and only in the smallest degree, as putting so to speak, a fine edge upon the price, a causal fact. To claim for the marginal item either of demand or of supply, or for both, the function of price determination parallels the case of the fly in Aesop's tale who sat on the axle tree of the chariot and said, "What a dust do I raise!"

The truth of the case appears to be as follows: There are margins of many and various sorts, all important to the problem of supply. Prices of agricultural products are commensurate with cost at the extensive land margin, but equally so with cost at the capital-goods margin. So also of the intensive margin, of the day's-end fatigue or recreation margin, and of the alternative-opportunity margin. Each of these margins stands as a fact or an influence for

the limitation of supply; the refusal price, the "necessary price," at each of these margins is the market price.[10]

But some of these margins are of the distinctly personal sort, as, for example, the fatigue and the opportunity margins; nor is there the possibility of any instrument margin, excepting as through the relation of the instrument to the entrepreneur's personal activity, as an aspect of the entrepreneur problem, and as an expression of the judgment and choice of the entrepreneur fact in production.

Any change in price will involve a rearrangement in the entrepreneur complex or group of productive powers, a readjustment or realignment of his productive forces and agents. At the intensive margin of effort, and commonly at the intensive margin of utilization of his instruments and agents, each and every entrepreneur is marginal; that is to say, not all of his product is equally near to the margin; he has different costs for different increments of product. With falling prices any entrepreneur may transfer part or all of his lands to other products, or may sell off part or all of his capital goods, or reduce his labor investment, or restrict his loan-fund borrowing; or he may, leaving part or all of his investment undisturbed, transfer part or all of his personal activity to his next most attractive alternative; or he may completely abandon the old line of production. In this case of abandonment also, he and his capital may hold together as one productive group or complex, or may scatter into various industries; with falling profits, and possibly with failing pleasure or interest in the business, or at the approach of old age or of

[10] In the main, of course, whether any man is marginal, or at what point in his production he reaches a margin, is the result of the objective conditions that he has to face. Each margin is thus rather the effect of price than the cause of it; the total situation is directive of each person in it, who in turn himself helps to make the situation. Each person must be recognized as in his measure contributing toward the total situation. Cost has thus—and precisely at this point—to do with price. If there is confusion in thinking of any particular fact as at the same time both cause and effect, let one imagine himself as jumping—the last person—upon a crowded raft, and sinking with it; does one sink the others or do they sink him?

ill health, he may decide to retire from productive activity, reducing his possessions to the form of loan-fund capital. But whatever may be the modifications which result, they will come about through him as a man marginal in some or all of his activities, and no instrument will be marginal excepting in its relation to him. And no one of all his possible margins, and no total of all the different margins of all the different entrepreneurs, will be price-determining or even price-influencing except to the degree that supply undergoes modification and to the extent that supply is an influence in the fixation of price.

As an entrepreneur problem, then, all outlays are elements of cost; and personal preferences, repugnancies, considerations of climate, neighborhood, home ties, national prejudice, wholesomeness, cleanliness, good repute—all are elements in cost to the extent that they serve to limit supply, the cost problem with reference to each man, and thereby to any instrument or agent under his control, being simply and solely to determine the point at which supply in different quantities can be had from him, and the degree and the extent of his elasticity in production with changes in price. And it is as one among all the other cost influences, but commonly as the influence of paramount importance, that opportunity cost acquires significance in the value problem. Cost is simply the money expression of the total of resistance to the entrepreneur's production.

It is evident, therefore, that wages, interest, and rent are, from one point of view, income, but to the extent that they are received from entrepreneurs, are costs to entrepreneurs. Value and distribution are therefore, as has been said, merely different aspects of the same problem.

It is, however, an easy inference, but none the less a mistaken one, to conclude that costs are equal to value, that is, that all of the product is distributed within the cost category. All excepting the marginal items of product afford to entrepreneurs a surplus above cost—producers'

quasi-rents, occupation differentials. Of this entrepreneur remuneration, only a part is necessary remuneration—minimum profit. All of the producers' differentials, personal quasi-rents, fall within wages of superintendence, profit in the broader sense, but not cost elements in profit.

The problem of each independent producer—each entrepreneur—is how through one or another combination of the productive energies at his disposal—land, capital, hired labor, and his own activity—to obtain the results most desirable to himself. Both costs and distributive shares stand, therefore, as entrepreneur adjustments. Each human being has before him to decide, in view of his peculiar situation and adaptation, whether he shall be an entrepreneur, a purchaser of productive powers, a combiner and adjuster of productive energies, or whether he shall sell his own productive energy to another, shall be a hired item, a mere instrument, like the land or the draught horse. The wage-earner differs from the draught horse only by the fact that the wage-earner *may* become an independent producer or an employing entrepreneur. As wage-earner he sells his productive power precisely as the capital-owner or the land-owner sells the productive efficiency of the things that he controls.[11] As far as the entrepreneur's personal

[11] All of this, of course, conceives cost as an entrepreneur computation. Were it here important, it would doubtless be possible to inquire into cost as looked at from the point of view of the wage-earner; only that this cost would not refer to the cost of the produced commodity, but only to the cost to the laborer of his labor pain or of the remuneration for it. This cost might be one of labor pain or of displaced recreation or both; or if, as is more commonly the case, not leisure but another sort of work, or the same kind of work under another employer, were the displaced fact, the cost would be one within the usual opportunity category.

For purposes of investigating the causes of the labor situation in which the employer is placed and in which his costs are to be computed, there is doubtless importance in the laborer point of view and manner of analysis. But this investigation is on the level of *the explanation* of entrepreneur costs; for the entrepreneur the cost question is one of how much and not why. His costs are as they are.

But it is still to be noted that the mere item of outlay may be quite misleading as measure of cost. Cost, it must be remembered, is that total which the market price must remunerate if production is to be maintained; it may then well be true that for producing an output

remuneration is concerned, it suffices to say that if he cannot anywhere, after his different outlays, retain for himself a return as desirable (not necessarily as *large*) as that which he could control through wage service, wage service will be his alternative. And thus again we return to the fact that all these different outlays,—rent, interest, and wages among them,—are elements of cost, that is to say, form part of that total for which the market price must serve as indemnity if the production of the entrepreneur is not to diminish or cease.[12]

But after all is said, there is still an aspect of truth in Ricardo's dictum that "corn is not high because rent is paid, but rent is paid because corn is high. . . . . If the

of 105 the necessary outlay is only 100, but that this same outlay elsewhere applied may control a return of 102; in such case, the alternative productiveness of 102 and not the smaller 100 item of outlay must be accepted as the cost.

[12] Acquiescence in the traditional terminology of the cost discussion, with its categories of rent, interest, wages, and profits, has seemed to be imperative here in view of the particular issue under discussion —the rent-cost problem—and of the exigencies of an intermixed exposition and criticism.

So important is the doctrine of this chapter, especially with regard to the multiplicity of the different margins, and their nature, so great the danger of misinterpretation, and so imperative the resultant call for all possible expositional clarity, that, even at the certainty of some repetition, a restatement of the doctrine appears to be desirable; a changed direction of approach will, in some measure, require the anticipation of certain important steps in the general argument.

The marginal cost of product coincides reasonably accurately with the expense at the extensive margin, or with the displacement either of agricultural or of non-agricultural product at the extensive margin, or with the displacement either of agricultural or of non-agricultural product at the intensive margin: and also, for each and every use of each and every grade of land, there is—or may be—a question of some alternative use, the displacement of which would be refused were prices in the first use appreciably to fall.

Here are surely margins enough; but there are more. We may as well talk of the extensive margin being an interest or a wage margin as a land margin. So, at the intensive or at the alternative margin, the choice is really whether, under the conditions, it is as gainful to apply more labor or capital here as elsewhere. Still further, in each of these problems, as in practically every problem, capital and labor come, as regards each other, to an indifference of productive applications. Evidently the margins are multitude; and all that we may say, from the

high price of corn were the effect and not the cause of rent, prices would be proportionally influenced as rents were high or low, and rent would be a component part of

cost point of view, is that any one of the agents may, through a change in its costs, become the margin-changing agent—that is to say, the agent deciding the producer to modify or abandon his line of productive activity.

This amounts to saying that over against the general situation, which the cultivator does not control, and the changes in which express themselves as fluctuations in the volumes and in the values of production goods, is the cultivator, whose problem is always to find that line of productive activity the conditions of which are, relatively to him, by virtue of his peculiar adaptations, his efficiency, his preferences, and his equipment of goods, most advantageous or least resisting.

Viewed, then, as a whole, the aggregate human demand for goods relatively to one another being assumed, and the aggregate human efficiency for production in its actual environment of land and capital being taken for granted,—and all this in connection with a system of production functioning under the direction of independent and competing human agents, each engaged in the attempt to find for himself the most advantageous line of application of the productive powers and agencies under his control,—market value emerges as a point of adjustment or of equilibrium for all the forces and influences engaged. Normal value is the point at which, if conditions remained the same, the equilibrium would be permanent; changing values are merely points, in a moving equilibrium, reached but only temporarily held, under these readjustments and realignments of productive activity, brought about by the changing conditions of demand, of processes, and of supplies of productive agents.

Man is to be conceived as the subject and the center of economic science; his environment of land and capital (and, for the individual, of his fellows) as his opportunity; his industrial product as his remuneration; his economic activity as his attempt to produce and to exchange this product along the lines of least resistance (sacrifice). Normal price is to be conceived as the point of least resistance, not only for the buyers and sellers directly engaged in any employment, but also for producers in other employments seeking those lines of activity affording the most satisfactory—or least unsatisfactory—remunerations. "Market prices are found to fluctuate in either direction about these normal or ideal prices, and cannot, in the competitive adjustment of sacrifice, long or widely depart therefrom. In short, the normal price is that price at which no producer can, to his own thinking, better employ himself in some other line of production. Prices generally would stand at their normal, if no producer or consumer could to his own thinking advantageously change his manner of economic action. But, like the ocean, market values have no rest. Prices ripple and wave above or below their ideal level, as desires and appetites, opportunities and abilities, slowly or rapidly change in force; yet . . . . none the less . . . . confess the controlling power of this level as truly as do crest and trough their subjection to the ideal level of the sea."—Davenport, *op. cit.*, p. 104.

But men as employees are passive facts, mere agents under the

price." [13] But, obviously, these same remarks apply equally well to wages and interest. Wages are high all along the line because, in view of the high productive powers of labor, entrepreneurs' competitions are placing a high market price upon that labor; thus the production of any particular commodity has to face this high wage-cost level, and must recoup itself for these wage costs through a corresponding level of prices.

It is even so of any agricultural product; the supply of land, relative to the demand for agricultural products in general, gives, through entrepreneur bidding, the rental values to different lands; this rental value stands as a datum of cost for the production of any particular agricultural product. But in ultimate analysis, it still stands as true that it is not the rent that makes the prices high, but the scarcity of land.

The real and the recurrent difficulty in all of this is that costs and the relations of cost to value do not touch the ultimate causes in the case. Entrepreneur computations take all items of outlay cost as data, as definitive, fundamental facts, which, for any other than the entrepreneur point of view, they indubitably are not.

All of this, however will get clearer with a change in point of view.

A collectivist society, having no rentals to pay, could compute none as facts of cost. In case the improvement or upkeep of land were under consideration, the sole question would be whether the energies and materials applied could not be better applied elsewhere. The sole question in the use of already existing land opportunities for any particular product would be whether these opportunities could not better be used for something else. The only resistance to the current production would be—so far as

direction of managing producers, and are therefore only potentially directing forces. The problem of production and of marginalship is, accordingly, an entrepreneur problem.

[13] Ricardo, *Political Economy,* chap. ii, sec. 29.

concerned the land—the displacement of something else. That is to say, the collectivist computation of land costs would be entirely one of opportunity cost. Were the land of a sort adapted to only one product, a cranberry swamp as a possible example, no cost could be computed for the land use. Of such land it might be said that its utility was high because its products were highly useful; but *land-wise* the utility product would have no cost. But, with land of alternative applications, the displaced product would stand as the land cost of that product actually produced. If the displaced utility were great, the produced utility would also have to be great or be foregone. While it would doubtless be true that the utility of the land could be ascribed to its productiveness for, say, corn, it would none the less remain true that the corn utility, at below a certain measure, would not be permissible of acceptance, because of the high utility of the land as reflected from its adaptation to another product—wheat, for example.

For competitive society, Ricardo's doctrine should, therefore, be revised to run something as follows: Ultimately, corn is not high because rent is paid for corn land, but rent must be paid, because, to command the land for corn, a rental possible from some other product has to be refused.

But, so formulated, the doctrine is, in truth, rather transitional between the collectivist and the competitive points of view than fully competitive; it retains, indeed, strong traces of its collectivist origin. For, under competitive conditions, not that rent barely sufficient to displace the alternative use is the land cost, but the rent really paid in the actual use.

Transfer the case fully into the entrepreneur competition, and all this becomes clear. Land, being limited in quantity, is therefore cultivated to an extensive margin. The limitation upon the land supply expresses itself under the guise of rent for all lands or powers of land above the margin. Rent is fixed by the bidding of entrepreneurs in

view of the fact that a possessor of the better land is, by virtue of his rent outlay, excused from an approximately correspondingly high outlay for labor and instruments of production. Rent is thus an item in entrepreneur cost, and is causal in the same sense that other outlays are causal—in the sense, that is to say, that this rent is the form under which, in competitive production, a shortage of land expresses itself. The rent is a necessary outlay, or, if avoided, must be avoided at a correlative increase of outlay in other directions. But, ultimately speaking, prices are not high because rent is paid, but because of the limitation upon the supply of land which, by driving cultivation to poorer land powers, must give, whether under collectivist or under competitive production, a distinct advantage to all cultivation upon non-marginal lands. But, under competitive production, these differential advantages take the form of property rights for their possessors; the land acquires the aspect of a competitive agent affording a valuable opportunity, by the use of which a cost of production could be obtained lower, were the rent not computed, than other costs, and lower than the market value of the product; thus the rent comes necessarily to be paid.

But, ultimately speaking, the *rent* does not increase the price; by the very fact that the land is limited the high price is unavoidable. Unquestionably, were the land supply greater, the rent would be lower, and the prices lower; but mark, not, in last analysis, lower because the rent is lower, but because conditions have come to exist, which, in making the lower price possible, have made the high rent impossible. The rent cost and the relation of it to value are mere expressions, in terms of entrepreneur competition, of causes underlying and ultimate—environmental facts, with which production must get along as best it may.

The foregoing conclusions lead directly to the conclusion that, from certain points of view and for certain purposes, it is necessary to recognize as the true cost

determinants these environmental facts, the *situation facts,* as they will henceforth be called. What this term means may possibly become clearer with a review of one of Ricardo's comrade controversies with Malthus:

Malthus had argued that rent can arise only when land is fertile enough to yield a surplus above the subsistence of the laborer. For our present purposes, and for all the purposes of Malthus' argument, and in closer conformity with later theory, this term *subsistence* should better be interpreted in the sense of *wages,* the doctrine then running to the effect that unless the yield will more than suffice to pay the wages, there can be no rent collected.

But under either interpretation it is clear that were all land sufficiently poor—and all equally poor—and yet, with all of its badness, unlimited in quantity, there could be no rent. Thus Malthus' position sums up as follows: Two conditions must concur before rent can emerge, viz., that there be land good enough to yield this surplus, and yet that there be a scarcity both of this and of better land.

These better lands—what there were of them—Malthus regarded as a source of material well-being, a social asset; rent is the market expression of this social good fortune. True, it might be objected that, with this land in the possession of private owners, the attendant advantages must accrue, not to society in general, but to these owners; but, even so, the owners must be admitted to be a part of society; and more than this, not all the benefit could be monopolized by the owners; as a condition to the receipt of their rents, the land must be utilized, with a resulting larger supply of products and with lower prices to consumers.

But Ricardo placed the emphasis differently—not upon the "I have" aspect, but upon the "Oh, had I." The existence of rent he interpreted as an expression of the niggardliness of nature, the evidence of the difficulty under which society is laboring in getting a living. Out of this bad case, progressively getting worse, the land-owner is

acquiring a progressively larger deduction from what others can enjoy—that is, out of a national dividend grievously restricted at the best, is acquiring not merely an unearned increment, but an increment received out of the social distress, and greater as this distress is greater.

Here, as mostly elsewhere in economics, the Ricardian temper and mood and point of view have carried the day; and not without justification, for Ricardo was right. But so was Malthus. Given the ideal endowment of piety, with a sufficiently thankful heart, one has it always at hand to render thanks that things are no worse: "Every misery we miss is a new blessing, and therefore let us be thankful," spake the completely genial fisherman. And so, in substance, Malthus was thinking how much better things were than if they had been worse; Ricardo, of how much better they might have been if they had not been so bad.

But as a mere distribution fact, as distinguished from a production fact, Malthus' view appears to present the better doctrine. What land there is, is wealth, as clearly as what capital there is. As a question, however, of the ethics of institutional distribution, the problem of the unearned increment, the right of property in the rent differential, Ricardo's view has something more to say for itself.

But as a problem of costs in competitive production, the two views need not have differed in application; Ricardo misapplied his doctrine.[14]

But it is none the less important to recognize that the land and the capital and the labor do not make the costs and the value of the products high, but low; the more

[14] On the main issue, Senior sided for the most part with Malthus. Ricardo had written (*Principles*, p. 53): "The labor of nature is paid, not because she does much, but because she does little. In proportion as she becomes niggardly in her gifts, she exacts a greater price for her work. Where she is munificently beneficent she always works gratis."

Senior replies: "Mr. Ricardo seems to have forgotten that the quality which enables land to afford rent, namely, the power of producing the subsistence of more persons than are required for its cultivation, is an advantage without which rent could not have existed. . . . . That we have in this country perhaps a million of acres capable of producing, with average labor, forty bushels of corn

agents and instruments, relatively, especially adapted to particular products, the greater the relative supply of these products and the lower the price. In fact, unless the case be one of complete indifference, no producer employs any particular agent or instrument, as against another, excepting as a saving of expense is promised thereby; all production goods are, for their particular products, value-diminishing influences. It is the scant supply of land and of capital and of adapted labor, and not their presence, which explains the relative scarcity of the product, its high value, the relatively high hire of the productive factors, and the correspondingly high capitalized value of such of them as can be capitalized. As a question of costs, rent, interest, and wages are, therefore, not ultimate explanations of value. The fundamental determinant is "situational," as connoting the entire case on the cost side, the original environment, the volume and kinds of saved wealth, the qualities and adaptations of men, the degree and the direction of development in the sciences and arts of production. Entrepreneur outlay costs are the values placed by competitive bidding upon the various opportunities and auxiliaries in the productive process, in view of the market values of the resulting products.

But that the market remuneration of any productive fact is a derivative from its value-producing power, in view of the existing conditions of demand and of supply, does not imply that this remuneration is either equal to its contribution or is proportional to it, or, indeed, that the precise amount of its contribution is ascertainable, or that,

an acre, is a benefit; that we have not more than a million such acres, is an evil. That the average amount of what an agricultural laborer produces much exceeds what is absolutely necessary for the subsistence of an agricultural family, is a benefit. That the extent of our fertile land, and the amount of our capital, in proportion to our population, are not sufficient to enable him to consume, directly or indirectly, for his own advantage and that of his family, *all* that he produces, is an evil. . . . . To produce rent, both the benefit and the evil must coexist. The one occasions rent to be demanded; but it is the other that enables it to be paid. Mr. Ricardo's attention seems to have been confined to the evil."—Senior, *Political Economy*, p. 138.

if ascertainable in its relation to any one entrepreneur, this contribution would not be a different one for each different competing entrepreneur. In truth, the cost to any entrepreneur is rarely, if ever, the precise equivalent—were this quantum an ascertainable one—of the value significance of the productive factor to him; otherwise there could be no non-marginal entrepreneurs, and no producers' quasi-rents. And even at the margin the equivalence is really impossible of establishment; complete proof of this last must, however, be postponed to later aspects of the argument.

Recurring again to the Ricardian doctrine as to the relation between land margins and costs, a more important and—fundamentally—a more decisive argument remains to be presented: *There is no land margin of the sort contemplated in the Ricardian doctrine.*

Productive agents of countless kinds, labor of different grades of skill in all the different trades and subdivisions of trades, capital goods of all sorts and grades for numberless different purposes, lands varying in climatic and chemical and positional qualities, adapted to countless different uses and products, and in all conditions of original or acquired fertility and exhaustion, and with all kinds of improvement and modification through capital and through labor—are one and all, through competitive bidding, reduced to a certain sort of homogeneity, that is to say, to the homogeneity of market price. But all the differences between the different productive agents and instruments still persist. That all are subjected to a common price measure, which merely means that all are bought and sold, does not obliterate these differences or reduce all productive facts to an abstract fund. In truth, money and loan fund,—deferred options of disposing of wealth and services, suspended purchasing power,—are the only cases of abstractness or of true homogeneity known to economic affairs. We have already had some occasion, and shall

later have yet more, to notice that not even in point of utility do equal market values express or suggest equivalence. That the same man pays $500 for a furnace, a further $500 for a piano, and a third $500 for a back kitchen to his house, does not point to any actual or expected equality of service from the different lines of expenditure; still less do equal outlays by different men.

Nor even by an appeal to margins is the case for equality made stronger. That each of these three uses is marginal in the sense of being the last item that one would purchase at the price, may be merely derivative from the fact that each is the last that one would purchase at any price; and it may still remain true that one would, if necessary, have paid indefinitely more for each of the three things than was actually paid.

And still clearer is it that as between different men—simply because they are different and essentially incomparable in their mental states, to say nothing of differences of wealth and poverty, sickness and health, culture and crudity, vivid feeling and obtuse feeling—all utility comparisons fail utterly and hopelessly; there is no homogeneity possible here but this of purchasers' offer or of purchasers' actual payment,—either one a mere price homogeneity.

And all of this holds—and this is our point of goal—for production goods as truly as for consumption goods, though admittedly in less marked degree. Men as producers are dissimilar, not merely in intelligence and in special aptitude, but in wealth, in credit, and in degree and quality of objective material equipment. Production goods take on a different relation to different entrepreneurs accordingly as these entrepreneurs are different in their aptitudes, their purchasing power, their lines of production. Even were all goods capable of being distributed and graded into stocks of similar items, these differences in entrepreneur relation would still exist. But, in truth, most goods are not so gradable; even wheat is so only arbitrarily

and by overlooking minor dissimilarities and inequalities. Thus the purchaser commonly pays less for things than his limit price. And there are quasi-rents of production as well as of purchase or of sale. What any particular hirer or buyer must pay for any particular item of productive wealth is—even where frictionless competition is assumed —only what the next most capable bidder is willing to pay; the maximum bid of the buyer in question is very probably a quite appreciably greater sum; most bargains are concluded within an appreciably wide intermediate tract of higgling.

Applying now these principles to the land-margin question, it becomes evident that the margin of market value and the margin of personal service do not and cannot coincide. With the especial aptitudes or preferences of one man for intensive farming, and of another for extensive farming, and with all the modifications of neighborhood preference, birth, associations, family, friends, health, habit, religion, and the like, it is not at all certain that the man upon the lowest-price land, or upon rentless land, if there be any, could not and, if necessary, would not pay more than he pays. When, after years of profitable farming and contented rent-paying at an appreciable sum, the tenant falls on death, it may well happen that no new tenant can find it to his advantage to make use of this land on any terms. Every landlord knows that the rent income depends in part upon the tenant and upon the bargain; in every rural community the good tenant is as cordially sought after by landlords as is the good landlord by tenants. Never is the payment a trustworthy measure of the service of the land to the tenant, or, in the absence of this particular tenant, of the revenue, under an alternative tenant, to the landlord. The margin of occupation is, then, not a value margin; and it is a utility margin only with reference to a particular cultivator; the margin of

service may be far beyond and below the ragged, saw-edged, market-value line of rental payment.

A later development of the argument will serve to show that precisely here must fail the productivity theory of distribution. The remuneration is not the expression and equivalent of the value productivity, but is merely the market value of the value productivity. But all this must await its turn.

It thus appears that the marginal producer of any agricultural product is as likely to be upon high-rent land as upon rentless land. A fall in price is as likely to direct out of agriculture and into some non-agricultural employment the tenant upon the better land or the capital upon the better land as the tenant or the capital upon the low-priced or rentless land.

Nor is this at all to deny that rightly understood there is, or may be, such a thing as marginal land, land which, to the most capable cultivator of it, is barely worth cultivating upon no-rent terms; but it is to deny that this service-less land and rentless land are necessarily the same land; and especially it is to deny that a fall in price will necessarily send into non-use all land held without rent, or that there is any such relation between rentless land and market price as is indicated under the Ricardian doctrine.[15]

[15] The effects of a price fall upon land-holding are something as follows:

A fall in the value of any one agricultural product will set free some land for use in the production of other agricultural products; and when the redistribution in the uses of land has completed itself, its final effects will sum up: (1) in a small reduction in the prices of all other products; (2) in the same total of effects upon land rents in general as would follow from a small fall in the value of agricultural products in general.

Going more into detail, it may be said that a fall in the price, say, of wheat, will have as result a rise in both the extensive and the intensive margins of cultivation; that is, there will occur some outflow of labor and capital from all grades of wheat land into other employments, both agricultural and non-agricultural. But it is only by land somewhere becoming vacant that landlords are likely to lower their rents. Non-marginal lands will, however, remain only temporarily out of cultivation; less than the old rent is better than no rent at all.

We approach now a question which has been much debated, but which should not, at the present stage of the discussion, occasion great difficulty: Does the rent which land is worth for another crop enter into the cost of the crop actually produced?[16]

The following propositions may perhaps now be taken either as proved or as requiring no proof:

The rent paid for land used for wheat is a part of the cost of production of the wheat. The method of Marshall, Hyde, and Hollander,[17] of appealing, for a rentless price-

But with the redistribution of holdings and of lines of production, some cultivators having abandoned agriculture, the vacated better lands will be re-rented to cultivators variously selected. No-rent lands—or lands as near to this as cultivated lands ever get—may have been in the possession of tenants some or all of whom could afford to pay an appreciable rent; these lands and their tenants may be undisturbed by the fall in price, all the while that cultivators may have been moving off from better lands, driven therefrom by the inflexibility of landlords in refusing to lower the rents, or induced therefrom by the overbalancing attractions of non-agricultural employments.

But it is not likely—indeed, it is not possible—that the vacated lands be taken up solely by cultivators moving up from the poorer or the poorest grades of land; as rents fall and cultivation becomes less intensive, cultivators will turn to farm larger areas of land. The final adjustment will, then, sum up at something like this; that the marginal cultivators—on no matter what grades of land—will mostly have abandoned agriculture, while all cultivators will, in some measure, have diminished by marginal reductions their output *per acre;* the margin of cultivation, both extensive and intensive, will have somewhat risen; the methods of cultivation will have moved toward a less intensive type,—another way of asserting some measure of capital outflow; the reduction in the returns of agriculture in general will have distributed itself into lower rents for landlords, lower returns upon the capital instruments still remaining in production, and very slightly lower personal remunerations for the human factor in agricultural production.

But the marginal costs for different products will still be the costs at the personal margin on no matter what grades of land.

[16] J. S. Mill, *Principles,* Book III, chap. vi; Jevons, *Theory of Political Economy,* Preface, pp. liii, liv; Patten, *Theory of Dynamic Economics,* p. 78; Hobson, *Economics of Distribution,* pp. 121–25; Macfarlane, *Value and Distribution,* pp. 130–35; and A. S. Johnson, *Rent in Modern Economic Theory,* pp. 78–82, are among the different supporters of the affirmative; see Marshall, *Principles,* for the most authoritative exposition of the negative argument; also, A. M. Hyde, *Journal of Political Economy,* Vol. VI, No. 3 (June, 1898).

[17] Cf. article by J. H. Hollander, *Quarterly Journal of Economics,* January, 1895.

fixing cost, to the intensive margin where no rent is earned or paid, is fruitless; cultivators at the intensive margin simply substitute labor and instrument outlays for rent outlays; there is no occasion for inequality of costs, or for the existence of marginal costs anywhere, by reason of the land or rent fact as presented in this view.

Conceiving all supply-limiting influences as costs, it is evident that any reduction, through corn culture, from the amount of land to be had for wheat-raising, must necessarily express itself in a diminished volume of wheat product, in higher prices for wheat, and in higher rents for wheat lands. But inasmuch as this leaves such wheat rents as are actually paid to function as cost items in wheat production, no reason yet appears for counting in the possible—and smaller—corn rents.

As a collectivist doctrine the land cost of wheat would be found in the displacement of corn; so, in competitive production, corn cultivation may be the cultivator's most attractive alternative; and, if the case were one of indifference between wheat production, corn production, and non-production, he might, with equal accuracy, speak of his outlay or of the potential corn as his cost. But this again is to call either the wheat *rent* or the corn possibility of *product* a cost; it is not to call the corn *rent* a part of the wheat cost.

In collectivist production the cranberry patch could not afford a basis of cost—having, by assumption, no alternative use. But in competitive production other competitors would pay the cranberry rent, and would thereby impose it as a cost upon the renting tenant. In competitive production, then, the presence or absence of alternative adaptations does not decide the cost problem. Opportunity cost for the individual is in his outlays or in their alternative applications and is not necessarily a matter of the alternative applications of the production goods.[18]

[18] There is no force—and for present purposes, no relevancy—in the doctrine that, because the remission of rents would not lower price,

To Mill's dictum, "When land capable of yielding rent in agriculture is applied to some other purpose, the rent which it would have yielded is an element in the cost of production of the commodity which it is employed to produce," Jevons objects:

> Here Mill edges in as an exceptional case that which proves to be the rule. . . . . If land which has been getting £2 per acre rent as pasture be ploughed up and used for raising wheat, will not the £2 per acre be debited against the expense of the production of wheat?

That Jevons has assumed a case of production by a cultivating owner somewhat obscures the reasoning. But it is clear that if this owner is computing his cost according to an alternative product, he must make the displaced pasture product the cost of the wheat, and not the rent; and if he is computing his cost according to the rent, he will find the cost in that rent which, as landlord, he could derive from the land by renting it for its most profitable use—the wheat use—and not according to some smaller rent quantity possibly obtainable for the pasture use; thus, in neither case can the *pasture rent* be a cost.

Jevons, however, carried his doctrine to its logical conclusion: "When labor is turned from one employment to another, the wages it would otherwise have yielded must be debited to the expense of the new product." There is again the same sort of confusion of thought, but this time it is in the failure to distinguish the wages of work from the product of work. But as applied to competitive production, Jevons' doctrine amounts to saying that my cost is not in what I do pay my men, but in what I might have paid them, had I paid them less.[19]

rent is no part of cost. This would equally well hold to exclude interest or wages from cost. And if it be urged, as, for example, by Hyde, that there is a marginal subsistence wage which must be paid in order that the laborer live, it is, perhaps, fair to reply that the landlord may equally need the land hire in order to live; at any rate, the cancellation of the hire would, as has been already shown, finally result in the exhaustion of the fertility of the land.

[19] It should be noted that Seligman in his lately published *Principles of Economics* adopts in its most unmitigated form the

Patton's way of putting the case is perhaps its most forcible expression: "If the marginal land used for gardening will yield a rent for wheat, the value of the marginal produce of garden products must equal the cost of the labor employed plus the cost of the land when used for wheat."

Surely the product must at least equal in value the labor wage and the wheat rent; but it must more than include the wheat rent; it must include the rent for the garden use, which has, by assumption, been important enough to displace the wheat use.

But there is nevertheless, as has already been indicated, some saving grace of truth in this alternative-rent-cost doctrine; an influence important for the price of wheat, and an influence much more nearly fundamental than mere entrepreneur outlay, is vaguely in the background of the thought. Still, it is not the displaced corn rent that makes either the prices of wheat or the rents of

reasoning of Jevons: "In the cost of the wheat, therefore, must always be included the rent which the marginal, or no-wheat rent, land would earn if employed for the next lower use" (p. 377).

And Jevons is likewise followed in his confusion of rent with displaced product:

"Furthermore, not only must the marginal rent [the displaced product?] always be included in cost, and therefore in price, but in a higher sense the differential rent as a permanent phenomenon is also a part of price. The rent of anything is its product. [True only when *product* is used in another connection and in quite a different sense, as distributive value share.] The greater product of the better land forms as much an element of the supply as the smaller product of the poorer land, and price depends on the relation of the total supply to the total demand. . . . . Price is not fixed by the marginal or maximum cost but *at* the marginal cost, and the margin depends upon the output of the better grades, receding as this increases, advancing as it falls. Every bushel of wheat, whether it comes from good or poor land, affects the supply, the price, and the margin."

Now note the argument: The rent on land is a price-determining fact, because the product of the land is a part of the aggregate commodity supply. But the objection immediately arises that in this higher sense—a view which emphatically deserves far more extensive and more thorough development than it has yet anywhere received—no cost of any sort, but only product, has anything to do with price. And in last analysis, truly, products are not to be explained by remunerations, but by supply of agents; the supply of products, being deter-

wheat land higher, nor is it the land which might have been used for corn but instead was used for wheat that makes wheat prices and wheat rents higher—for precisely the contrary is the fact—but it is the limitation upon the supply of wheat lands by virtue, among other causes, of the use for corn-growing, that makes the supply of wheat smaller, thereby the prices higher, and thereby again the wheat rents higher.

And once more be it repeated that rent is not the ultimate cause of price; rent in any line of production is merely the entrepreneur expression of the limited quantity of agents accessible for that industry. But in principle all this holds equally of wages and of interest as costs; the relative scarcity of productive agents renders the products relatively scarce, thereby the prices high, thereby the remunerations for the agents high. The high remuneration is cost, in the sense of a supply-limiting fact, only

mined by the supply of agents, determines in turn—on the cost side—the value of the product; and the value of the product in turn explains the remuneration of the agent. But this is all on a level underlying the shallow entrepreneur-cost analysis—the merest superficial adjustment working within, and controlled by, the larger situation facts—and excludes all remunerations from the category of causal factors; the argument is thus not good to include rent equally with wages in cost, but to exclude, together with the entire cost computation, all of the different subheads and factors of cost from the category of value-determining influences; under this analysis, both rent and interest appear as results of value, as mere distributive shares. That is to say, not rent, but the lands—their scarcity; not wages, but the supply of labor, must explain the limited volume of product and the value derivative from this limitation. And so bearing in mind that wages produce nothing; that land, and not rent, has productive power; that land is one thing, and the rent of it another and a quite distinguishable thing, we are in position to appreciate the infinite confusion of fundamental standpoints and of derivative analyses involved in our author's argument as it continues (the italics are the present writer's):

"The rent of the better instrument is the product of the better instrument. Each unit in the supply is a part of the total product *or total rent*, and must therefore affect the price. Hence the rent *or product* of any instrument of production, whether it be land or capital or labor, whether it be marginal or differential *rent*, is really an element in the price, in the sense that, were it not for that *product*, the price would be different. Land is here in precisely the same position as other things" (p. 379).

as, under entrepreneur production, it is the result and the expression of a relatively limited supply of agents.

And now we are in position to estimate the measure of truth contained in the view that, the market value of agents being fixed, and the market opportunities and burdens being common to all entrepreneurs, and the entrepreneur's personal equation of circumstances and ability being the selective determinant of marginalship, entrepreneur differences must stand as the only variant in the determination of the relative costs.

Such, indeed, would be the truth, were all industries alike in their technological aspects; were labor, for example, the only productive agent, or were all industries equally capital-using and land-using and labor-using in their methods of production. Or the proposition would hold, if it were possible indefinitely,—as in large degree it is possible, and as at the margin it is practically always possible,—to substitute one agent for another, so that no relative scarcity of any kind of productive agent could ever obtain.

But as the case actually stands, peculiarities of adaptation in productive agents, and peculiarities in entrepreneur ability and adaptation have both to be accepted as fundamentally directive situation facts for the supply side of the value equation.

CHAPTER XVII

THE MODERN MOVEMENT

MARGINAL UTILITY AND SUBJECTIVE VALUE

(BOEHM-BAWERK AND VON WIESER)

In English, and especially in economic usage, the word value connotes relativity. Seemingly, this does not hold, in the German *Sprach-Gefühl,* for the German term *Wert.* Hence, translators of German economic literature and expositors of German economic doctrine have to choose between rendering the one German word *Wert* into the two English words, *worth* and *value,* as occasion may require, as against attempting to make the one word *value* serve as the English equivalent of both the relational and the non-relational senses of *Wert.*

In employing the two terms in English, there is the obvious advantage—if only the changes and shades of meaning in the German are correctly distinguished and reported—of leaving less occasion for ambiguity and confusion in the English readers' attempt to follow the German thought. On the other hand, there is equal danger of making distinctions where there were none in the thought of the German author; and if it should turn out to be true that the use, in the German, of the one word for two unrelated concepts has been a prolific source, not merely of misinterpretation from the outside, but of confusion and inaccuracy in the original thought, there is the added danger that the two words in English should import a clarity which is not in the original discussions, and should make gratuitously difficult the task of understanding how these confusions and inaccuracies have been occasioned.

However, there is nothing for it but to make the best compromise possible. Wherever in the following discussions the word *worth* is used, it may be taken as clear that the use of *Wert* in the original is non-relational.

Wert in the subjective sense is the significance which a good or a complex of goods possesses for the well-being of an indi-

vidual. . . . . Objective exchange *Wert* is the ability to command in exchange a quantity of other economic goods.[1]

Boehm-Bawerk regards this *objective Wert* as a quality attached to the good, and as without any necessary implication of service to the well-being of any individual; the concept is of a purely objective fact—the power of purchase—*Kraft.* There is, in fact, said to be no possibility of rendering subjective *Wert* over into objective *Wert;* though the first may be used to explain the second, there must be a distinct theoretical system for both. But "that two so distinct subjects must be handled under the one name of *Wert* is unquestionably a source of great danger." [2]

A good may stand as more than the serviceful cause—it may be the necessary condition—of human well-being; herein lies the distinction between *utility* and *worth.* Worth implies that

with the possession or the loss of the good a satisfaction stands or falls. . . . . When, with a good, an item of satisfaction, well-being, pleasure, is at stake, then will the effective interest we take in our own well-being be transferred to the good which we recognize as the condition; in it we respect and prize our own welfare.[3]

Nor is the notion of cost a necessary element in the worth concept; worth might exist with goods supplied by the bountry of nature, if only the supply were limited. Worth implies merely "that importance which a good or complex of goods, as the recognized condition of an otherwise absent utility, acquires for the well-being of an individual." [4] "The measure [*das Mass*] of the dependent service is everywhere the measure [*das Mass*] of the worth of the good." [5]

[1] Eugen v. Boehm-Bawerk, "Grundzuge der Theorie des wirtschaftlichen Werts," p. 4. (Conrads *Jahrbücher,* 1886, neue Folge, XIII, pp. 1–82, 477–541).

[2] *Ibid.,* p. 7.

[3] *Ibid.,* p. 9.

[4] *Ibid.,* p. 13.

[5] *Ibid.,* p. 20.

Notice that, despite the *everywhere,* there is here no thought of markets and of exchange ratios, but only of the service to the individual; nor, in fact, is there any implication or suggestion of the quantum of one dependent satisfaction relative to some other satisfaction, no comparison of one service with another, or of one necessary condition of satisfaction with some other necessary condition. The thought goes solely upon absolute magnitude of feeling; worth, or subjective worth, or *subjective value,* in Austrian usage—these terms are really interchangeable—is the significance attached to the means, as the indefeasible condition upon which the feeling magnitude is recognized to be dependent. It is absolutely essential that this fact be grasped and firmly held; the Austrian doctrine is either nonsense or hopeless error otherwise:

> I say advisedly and with casuistic caution, the entire theory of subjective *Wert* is nothing more than a great system of casuistry as to when, under what conditions, and to what extent, our well-being depends upon a good.[6]

And keeping in mind that the subjective worth of any good is measured by the need that without the good must go unsatisfied, it follows that no one item of a stock of goods can have a greater worth than that measured by the weakest desire ministered to by any item of the stock; so one item of a non-important class of goods may outrank another item in the most important class: "Not every peak of the Alps is higher than any peak of the Pyrenees;" all of which says that "the worth of any good is determined according to the magnitude of its marginal utility" (*Grenznutzen*).[7]

It follows that it is equally as false to measure the worth of one item according to the importance of its class of goods, as to measure the importance of the class according to the importance of the marginal item; the particular item, as item, or the group, as group, must get *its* worth according to the utility dependent upon *it.*

Obviously also the height of the marginal utility, the subjective worth of any item in a stock of goods, must

[6] Boehm-Bawerk, *op. cit.,* p. 20. [7] *Ibid.,* pp. 22, 29.

depend in part upon the degree of the individual want, in part also upon the size of the stock of goods. And here follows doctrine invaluable for future purposes:

> Since the relation of needs and provision may be extremely different with different individuals, it follows that one and the same good may have many different degrees of subjective worth for different persons, a fact, in the absence of which the existence of exchange would be absolutely unthinkable. Thus, in otherwise similar circumstances, the same quantity of goods has for poor and rich a different worth—lower for the rich, higher for the poor.[8]

Now passing over for the moment, as does Boehm-Bawerk finally, the difficulty of making utilities for different men commensurable or even comparable, and assuming this difference in worth for the rich man as compared with the poor man, we stop to note that each of these cases of worth is conceived by Boehm-Bawerk as a quantity of absolute magnitude, a matter in each case of the intensity of the need depending for its satisfaction upon the good in question. But the difficulty remains that solely upon the basis of these absolute magnitudes, no exchange can ever be worked out; if otherwise, there would never be any end to the exchanging between rich and poor. That they exchange, the poor man a horse, and the rich man a cow, gives no evidence of the importance to either man of either the horse or the cow, and indicates only that to one the horse is more important than the cow, to the other, the cow more important than the horse; that is to say, an exchange can take place only because the two traders differ in their estimates of the *relative* importance —the *relative* marginal utility—of the items under consideration, differences not of subjective worth—these of themselves would be irrelevant—but differences in relative subjective worth.

All this has, of course, nothing to say as to the importance or the accuracy of the Austrian concept of subjective worth, but refers only to the relation of this concept to the phenomena of markets and of market values.

Nor, in view of occasional passages in Austrian discussion, particularly in the work of Boehm-Bawerk, is it open to doubt that, upon occasion, full recognition is accorded in Austrian theory to this obvious fact of doctrine. But it is

[8] *Ibid.*, p. 41.

equally clear that the general trend of the discussion and of the terminology is the other way; the above-quoted passage is one out of numberless instances in which subjective worth is treated as relative, without explanation or apology and by mere assumption, or is out of hand asserted to be identical with market value—this last to the degree that the general understanding of Austrian theory has come to be that it explains market value by marginal utility, and resolves market value into marginal utility.

But that subjective worth is alone inadequate to explain exchanges, that by each trader two subjective worths must have been compared, and a choice between them made, that is, that subjective worths, absolute magnitudes, must be put into terms of relativity—must undergo the valuation process, before on either side a readiness for exchange can be reached—is entirely clear. No one is ready to trade by the mere fact that he has made an estimate of the importance to himself of some one particular article—has set a worth upon that article; he must have done a similar thing for that other article, the *quid pro quo,* else there can be no basis for finding a balance of gain in the transaction of exchange.

But now recurring to the basis—if basis there be—for comparing, in terms of more or less, utility to one person with utility to another person, it must be admitted that the naïve common-sense of the case is with the Austrian assumption. It does appear to mean something when a boy asserts that a blow hurts him more than it hurts another boy, or when it is said that music gives one man more pleasure than it gives another, or that the higher orders of life feel pain more intensely than do the lower. Just what or how much this naïve deliverance may signify is a question rather for the psychologist than for the economist; but that there can be, at the most, only a vague and inaccurate comparability and commensurability, is apparent; there is little promise here of scientific service.[9]

The truth probably is that, in the final and ultimate

[9] "Ah, sir, a distinct universe walks about under your hat and under mine—all things in nature are different to each—the woman we look at has not the same features, the dish we eat has not the same taste, to the one and the other; you and I are but a pair of infinite isolations, with some fellow-islands a little more or less near us."—Thackeray, *Pendennis.*

psychological analysis, the more or less in these cases is itself essentially relative; to say that a thing pains me more than it pains you is true only with the reference and with the limitation of my larger or smaller capacity, my powers of endurance and of self-control, and the intensity of my coexisting sensations, perceptions, and emotions; that is to say, the comparison of my pains and yours is a matter solely of the relative importance of these quantities, each as parts of two distinct sensational and emotional situations and systems; that my *more* is more only in the sense that it is, as a question of proportion, a larger share in my emotional system,—is a greater quantity as matter of proportion, the things being compared only in this aspect of ratios to the other facts in their respective sensational and emotional environments.

But with the recognition that, as applied to items of demand or to items of supply, subjective worth is an irrelevant concept until carried over into a comparison of two subjective worths—into a subjective valuation—that is, with Austrian theory interpreted at its best, it becomes true, and is to be regarded as one of the chief merits of the Austrian analysis that this difficulty as to the comparability of the mental states of different men disappears; the ratios of equality or of inequality can be compared, entirely irrespective of the quantities constituting the ratios.[10]

But there still remains the problem as to how the different feelings of the same individual, at any particular time and in any given set of circumstances, are somehow reduced to a common denominator and made commensurable; and here the discussion of Boehm-Bawerk is, in the main, admirably convincing:

Are feelings in any wise rational facts, and, even if so, are they susceptible of rational measurement and com-

[10] The difficulty disappears for value theory, in the restricted sense; but it is not so clear that it does not persist for the theory of interest. For, if my emotional quantities are not comparable with yours, how comes it that my emotional quantities of today are comparable with those of a week or a year hence? It is, perhaps, enough that each individual does somehow make the comparison, in a manner satisfactory to himself, and that with what justification and with what measure of accuracy or of error need not concern the economic investigator. Perhaps it is enough that different situations appeal with different degrees of strength to present will and choice.

parison? Can whimsies be subjected to appraisal, so as to stand in mathematical relations of beauty, agreeableness, or sweetness,—this person or thing one and one-half times as beautiful or as beloved as another, etc.? Well, if, at least in some crude but effective fashion, they were not so, no economic life would be possible; there could be no principle of greatest pleasure with least pain; if we were unable to posit the greater here and the less there, we should have no way of deciding which desire to satisfy or to provide against. Somehow we do the thing. The pleasure from a cold bath is sufficiently unlike that from a symphony concert, and both from that of satisfying hunger or thirst; but we know right well at any given time which pleasure is the greatest [which opportunity most attracts us]. Likewise the toothache is a different sort of pain from a pin prick; but we are able to decide which is the greater matter. Somehow we arrive at a decision whether, with a scant supply of water, to use it for drinking purposes, or for watering the crops. That we have an economic life is the proof that we do find a basis of commensurability, or at least of approximate comparability. We do decide that one pleasure is, in a general way, greater than another.

But after all, can we arrive at the conclusion that one is greatly better, or moderately better, or, again, only inconsiderably better or greater than another? Can we get at it in any accurate way, even to mathematical precision, so that pleasure *A* may be pronounced to be, say, three times as great as pleasure *B*? We certainly do it, and we do certainly express ourselves in this precise way, although the quality of the process may not rationally justify the preciseness in the statement of the result. How otherwise should we trade? A boy is about to buy some fruit; he may have for his money one apple or six plums. He does in fact compare the pleasures; and in getting at a decision, he must do more than decide that he likes apples better than plums; he must decide whether he prefers one apple to six plums, or six plums to one apple. Or if two boys,

A and *B*, are trading plums for apples, shall *A* accept the offer of three plums for one apple? Take it that he refuses successive offers of three, four, and five, but accepts the offer of six; all this is nothing else than a judgment on his part that the pleasure from the offered good is or is not greater than the pleasure obtainable from the *quid pro quo* to be rendered.

And it is plain that if we can call an apple worth three plums, we can call a plum worth one-third of an apple. We do arrive at mathematical statements, precise, definite ratios; and so it is perhaps true, as von Wieser insists, that all of these relations of greater and of less worth finally trace back to relations of equality.

But we remark that while all this is, in the main, as convincing as it is clear in statement, there are nevertheless some implications in it to call for question. The dubious aspect of it all is that it all sounds in terms of pleasure and pain, the comparison of pleasure with pleasure, or of pain with pain, or of pleasure against pain. It is true that this is not peculiar to the Austrians,—to the utility school, so called, in economic thought; it is characteristic of all or of nearly all of economic discussion present and past. But it is the more manifest that with the rapid movement in psychological opinion toward what is termed the "volitional or functional psychology" as distinguished from the passive or associationist point of view—the newer insistence upon impulse and instinct in human activity as against calculating and reflective choice—there is becoming increasingly clear the necessity for reformulation of the fundamental assumptions of economic theory. The process of valuation is distinctly a psychological phenomenon, and the problem of value is the fundamental problem in economic science. It may not be too much to say that the next line of advance in economic theory will be distinctly psychological in character, and that further progress awaits its new impulse at the hands of the psychologist.

It must be admitted that in all fields of investigation, other than jurisprudence and economics, utilitarianism stands as a point of view discredited and outworn. However defensible this laggardness may be for a science where

the question is merely, as in jurisprudence, on what reasonings have legal precedents and legal institutions been worked out, there can be in utilitarianism no resting-place for those sciences which, like economics, ask not what opinion the doctors of the science have held concerning the facts, but what objectively are the facts. Economics must keep itself abreast of modern thought or, at the worst, must more or less belatedly follow after. The preliminary step is, then, to recognize that utilitarianism, or any form of hedonistic theory, is a thing of the past.

It is precisely from this point of view that the Austrian school comes seriously under suspicion. Whether it be by necessity and fundamentally, or merely through terminology and gratuitously, there is overmuch flavor in it of Benthamism, too much talk of utility in the sense of pleasure, and too much analysis of market activities in the aspect, not merely of egoistical and cool-headed farsightedness, but also of calculations worked out under a common denominator of utility for feeling—"pleasure by the shilling's worth."

This is, in any event, if not bad doctrine, at least questionable and unnecessary doctrine. It lacks catholicity. There are too many thinkers who believe that men sell and buy economic goods from impulse and habit and irreflection—that instinct and appetite and spontaneity manifest themselves in the economic world as truly as in the world of play or romance. There are those going even so far as to say that primarily we do not desire things because they give us pleasure, but that they give us pleasure because we desire them. Just as the chicken pecks its way out of its shell without foreknowledge of the glories of the outside day, and, immediately upon exit, picks up a grain or two of sand, nowise interested in the nearby gratification from its pungent flavor or in the far-away joys to accrue from a well-sanded digestion, just so human instincts and tastes and impulses reach their time, and spontaneous activities press forward to expression; rattles wane and dolls wax, while in later succession sleds and canes and sweethearts and homes and offspring and offices and professorships crowd upon the stage of human activity. Things move from indifference through gratification to satiation, as men change in their equipment of desires and tastes and sympathies; and, when a thing comes to give

us pleasure, it does so merely because we have come to like it. As one wakes in the morning according to the inner time-lock which he set at bed-going, as the hypnotic patient carries out, days later, the mandate given during his forgotten trance experience, as the *idée fixe* of pathological mental conditions, or even of habit, guards one against all influence of argument or appeal, as the resolve of yesterday remains by that mere fact the cherished goal of today, so do all of us, in a wide domain of our activities, move in a half-blind trance of inherited impulses and instincts and of acquired tendencies and aims. So much of our action is essentially reflex that there is more question whether any of it is altogether calculated and purposeful than whether all of it is.

Boehm-Bawerk insists that we could not choose if we could not measure exactly. Possibly so; it is, however, important for the economic life only that we choose, and it is neither important nor clear that we choose or compute or compare in terms of the pleasure or the pain equivalents of the goods. It may be that the desire is for the good—the commodity, the fact—and not for the pleasure of which it may be the key. Possibly enough, the pleasure is a sort of by-product, an incident. So one may enjoy the process of getting rich rather than the wealth when acquired. It is often more important for happiness to have a goal than to reach it. Or, doubtless, the desire may reach out solely toward the goal.[11]

The fisherman who, when asked whether he was getting any fish, replied that he was not fishing for fish, but for pleasure, certainly may have spoken the truth; doubtless some of our activity is worked out under the pleasure calculus. But it is equally certain that one may be fishing for fish, and not for pleasure; not all of our action is to be reduced to a pleasure-and-pain computation; there is a spontaneous unfolding of activity—the disposition to function—the type of action insisted upon in the ethical theory called "energism." Play may be its own end and justification, not the pleasure of play; many men keep up the habit of living, with all its necessary and incidental activities, without attributing pleasure to the parts separately or to

[11] A student reports to me the reply of a petulant and inconsolable child: "I don't want nothing; I just want to want something." Later years of life know this feeling better.

the aggregate, and even under the conviction that life is a burden. A race of pessimists might not suffer in numbers, as compared with the most devoted of pleasure-seeking Epicureans. We seek things because they respond to our wants. It is sufficient that the fact be a desired fact, an inducing fact, a fact operative to call forth a response of will and choice. Who knows that he desires a thing or a situation always with a degree of intensity proportioned to the pleasure that the fact when attained will give, or is expected to give? Is the martyr seeking the pleasures of martyrdom? Now and then does not one smoke, at some blind "I must" call of habit, and even with the full knowledge that the process will not afford pleasure, and that the result will be a headache? Are the desires of sex, or the parental instincts and activities, sheer computations of pleasure? And if all our rational activities could be justified under this hedonistic calculus, and yet if this be not, in fact, the computation according to which they are undertaken, and if many of our activities are not reasoned, but are, instead, intuitive or habitual and, in either case, uncalculated, it must follow that another and more inclusive formula than that of the hedonist is in need of seeking. It is enough that we choose in fine gradations and with clear distinctions, and it does not matter whether the measure be accurate, the process rational, or the result correct.

That most of our activity is of the irreflective traditional sort is, indeed, admitted by Boehm-Bawerk: "Numberless economic acts are performed purely automatically or mechanically;" [12] and all choices might be reached in as mechanical a way as some are—and as perhaps all really are—and yet the economic facts would remain practically and theoretically much as now. We do seem to ourselves to do some considering; we might do either more or less and still the fact of deciding would remain—choices between goods and choices between alternative activities would still take place, and our economic theories would still formulate themselves very much as they are now formulated.

> I must simply insist with all emphasis that the correctness of our measurements does not signify, but only that we make them. . . . . Well or ill the reckoning is done in terms of commensurability.[13]

[12] Boehm-Bawerk, *op. cit.*, p. 49.

[13] *Ibid.*, p. 50.

So it does not much matter for the economic aspects of either the older or the newer thought whether one concurs in the anti-utilitarian protest. The later investigators, like the earlier, appear to be grievously given over to hedonism; but so have other men been to Methodism without obvious disadvantage to their economic theories. So much is, indeed, asserted by both Boehm-Bawerk and von Wieser; and one wonders mostly why, if all this hedonism is, in fact, so unessential, one finds so much of it.[14] And yet it may safely be asserted that there is not one single essential

[14] "Men strive after happiness. This is, perhaps, the most general, and certainly the most vague, expression for a complex of strivings, all of which have for the object the bringing about of such occurrences and conditions as we know and feel to be pleasant, and the avoiding of those we know to be unpleasant. Instead of 'striving after happiness,' we may use the expression 'striving after self-preservation and self-development,' or 'striving after the greatest furtherance of life.' Or we may, with equal propriety, use the words 'striving after the most complete possible satisfaction of wants;' for the expressions we are so familiar with in economic terminology, 'want' and 'satisfaction of want,' mean, in the last resort, nothing else than, respectively, the unsatisfied craving of man to be put under conditions he thinks desirable or more desirable than those he has, and the successful obtaining of such conditions."—*Positive Theory of Capital*, p. 9.

"To many of us it seems a positive hindrance to the fair fame of political economy now that its professors should talk of a 'calculus of pleasures and pains,' as if that were the foundation on which all economical theory must rest. If the economist is no longer assumed to suppose that all men act only from self-interest in the narrowest sense, why should he be supposed to measure only pleasures and pains?"—Bonar, *Philosophy and Political Economy*, p. 236.

"The facts are simply these: Every species of wealth is of value to us in so far as it helps us to supply some of our wants. These wants are of an almost endless variety, and differ very greatly in the degree of their importance. . . . . If any of these wants remain entirely unsatisfied, we are to that extent the losers; and their loss is in proportion to the importance of the wants whose satisfaction is desired. But each of our wants demands only a limited amount of the material which is appropriate to its gratification; and, when this has been granted, it demands no more. Moreover, each want can in general be supplied in such a way as to serve its purpose moderately well with a considerable less amount of material than that which would bring it up to the limit at which the demand would absolutely cease. Hence, as wealth increases in a particular direction the increments in that direction become less and less valuable for the supply of our wants. In all this there is no necessary reference to pleasure. If the need of living continued, we should go on about as before without any connection of pleasure with the gratification of want. . . . . We have seen already wherein the plausibility of the doctrine consists. Our end seems plainly to be in the realization of something which our nature wants. Such a realization brings pleasure.

doctrine in the system that might not, without substantial impairment or change of economic bearing, be stripped of its psychological or ethical implications.

For the purpose of the present discussion there is,

Hence it is very natural to identify pleasure with the realization of an end."—Mackenzie, *Introduction to Social Philosophy,* pp. 215, 216.

The interrelations of utilitarianism with the associational psychology, and of the two with the Lamarckian biology, and of the three with the notion of thought and feeling as merely material atom-activities taking place in the brain conceived as seat and origin of thought rather than as mere organ, are all suggestively and effectively set forth by Professor Fite in his *Introductory Study of Ethics:*

"The hedonistic psychology is that of the associational school. According to this school the mind is a series of mental states, of *quasi*-mental pictures, which (*a*) are various combinations of simple, homogeneous mental elements, whose form of combination is (*b*) determined by the order of external stimuli. . . . . The original substance of mind is thus wholly amorphous and indeterminate, like the surface of a blank waxen tablet, and mental structure is the mechanical result of the impressions left by external objects. . . . .

"On first sight human impulses show an enormous variety; and *prima facie* any impulse would appear to be as real and as elementary as any other. But for associational psychology there is no way of explaining this variety, except as quantitative variations of a single elementary, and hence real, desire, which is then described as a desire for pleasure. . . . . The hedonist finds that the young infant has apparently no desires except the sensuous one, and from this he concludes that the elementary desire is the desire for food and animal enjoyment. But according to the evolutionary conception, the development of desire does not begin with the individual infant, nor yet with the species; its earliest stages must be sought among the lower animals. Turning his attention, then, still further backward, the hedonist finds that the desires of the lower animals are still more distinctly sensuous. Sensuous desire then becomes his type or element of desire. . . . . The child . . . . loves his mother because the thought of her suggests all manner of comforts of which she is the source; originally she is the source of his food. . . . .

"It follows that the hedonist is a believer in determinism as opposed to free will. . . . .

"The distinction between the two views [Lamarckianism and Weissmannism] amounts to this: according to one, the environment may initiate a modification (i. e., create an instinct); according to the other, it can merely restrict the operation of instincts already inherent in the organism.

"But the vital point of the controversy lies deeper. It has to do not only with the inheritance of *acquired* characteristics, but with what is implied as to the mode of inheritance of *all* characteristics. The question resolves itself ultimately into this: which is primarily and fundamentally responsible for the course of human and animal development, the environment or the inherent nature of the organism? Now the Lamarckian places the burden of responsibility upon the

therefore, no occasion to enter into a criticism of the Austrian terminology purely in the aspect of its philosophical or ethical implications. However bad the psychology of the demand school in economics may appear,

environment. In other words, it is his object to show that all the characteristics of human and animal life are due entirely to environmental influences. . . . .

"From the hedonistic standpoint the fundamental characteristic of human nature is its tendency toward passive conformity. There are no specific impulses to satisfy, no specific ends to be accomplished; our only object is to make ourselves as comfortable as possible in view of the existing conditions; and provided we are comfortable, it matters not what kind of a life we lead. . . . .

"The hedonistic theory may then be regarded as a mechanical view of conduct. The ethical theory implies immediately a mechanical psychology, which attributes all the phenomena of conscious life to combinations of simple mental elements; more remotely a mechanical biology which translates the mental elements into physiological elements and the law of association into a biological law; and finally a mechanical cosmology which reduces all the reality of the world to simple physical elements governed by one physical law" (chap. vii, pp. 95–111, *passim*).

Thus all ethical appraisals, whether of approval or of disapproval, come to be interpreted as a sort of brain-tissue memory established by long experience, individual or racial, into lines of least resistance and intimate association between brain centers, in such wise that the facts or activities commonly connected in experience with pleasure or pain are regarded with approval or with disapproval as the representatives or the equivalents of the respectively associated pleasures or pains.

Among many possible illustrations of the prevailing hedonism of economic thought, the following are offered as typical:

Seager: "The normal purpose of consumption is to afford pleasure" (*op. cit.*, p. 67). "The sum of the efforts and sacrifices that are involved in production constitute what is known in economics as the *cost of production*. . . . . Sacrifices, ... the doing of things that are less pleasurable than other things that might be done but free from any element of pain" (p. 53).

Seligman: "The motive that guides men in their economic life is sometimes described as the economic motive. It may best be defined as the motive that compels every human being to satisfy his wants with the smallest possible effort, or which leads him to secure the most pleasure with the least pain. . . . . Human beings are impelled by other motives as well. . . . . In searching for the fundamental laws of economics it is convenient to exclude all motives save the economic. . . . . The so-called economic man is a complete abstraction. By the economic man is meant the human being dominated by the economic motive. Such a man does not, however, really exist. . . . . Side by side with the economic life are the aesthetic life, the religious life, the intellectual life. . . . . It is, indeed, the function of economics to study that aspect of human life known as the

it can be held to be of disadvantage to economic thought only in the sense that it holds the field against some better psychological formulation of economic foundations.

There is, then, no sufficient reason for quarreling with the term utility either on the ground of its distinctly hedonistic associations or upon the basis of some other word better serving the needs of the case. In truth, the better word is not readily forthcoming; and, whatever may have been the consensus of use in past economic discussion, it remains true that *utility* does not of necessity mean

economic life. We must not, however, forget that we are studying man in only one aspect of his existence" (*Principles,* pp. 4, 5).

"Since value implies capacity to satisfy wants, there are as many kinds of value as there are classes of wants. Things have a scientific value, an aesthetic value, a religious value, a philosophic value, a political value and so on. The value with which economics has to deal is economic value, a small subdivision of the whole. As this is a treatise on economics, we shall hereafter use the term value in the sense of economic value, that is, the value of anything for economic purposes. . . . . When we defined economics . . . . as the science of value, it must be remembered that what is meant is the science not of all value, but only of economic value" (*Principles,* p. 174).

Taken altogether this appears to mean that the economic motive and the economic field include all activity motived by pleasure and pain calculations; but not all human life is so motived, since some wants reach toward satisfactions expressive of other sorts of appeal. But it is clear that economics is regarded as hedonistic in all its computations. Were it in any wise relevant to the matter in hand, one might stop to inquire whether, by this test, a picture must not be excluded from economic consideration, pictures being aesthetic facts; and how is it possible that the redness of an apple should affect its market value? The services and the boluses of the physician are clearly enough economic items; but how about Christian Science healing, and about outlays for preaching, and for other ghostly comfort?

Pantaleoni: "It is evident that commercial or industrial activity or the activity (whatever its nature may be) displayed by men in the pursuit of what is commonly termed wealth has no other motive than egoism" (*Pure Economics,* p. 11).

And if it be true that all action is hedonistic, is it so in the sense of the seeking of pleasure and avoidance of pain, or is the calculation one not of pleasure and pain strictly, but only of pleasures and of pains? And how does the individual get these different pleasures and pains into any common denominator so as to become comparable? And is it safe to take pleasure or pleasures to be the algebraic negative of pain or pains?

To some of these questions the safest and simplest reply is *ignoramus;* and with regard to others it is probably true that for the purposes of economics, no deeper knowledge is called for than such as shall safeguard the economist from unnecessary pitfalls or from

"importance for happiness" or imply any sort of "pain or pleasure calculus." *Desirability* in the sense of the capacity to be desired is inaccurate, while *desiredness* is at least awkward. If, however, one revolts at the use of *utility* and *marginal utility, desiredness* and *marginal desiredness* may perhaps be acceptable.

Acquiescence in the term *utility* carries with it also an acceptance of *marginal utility*. Entirely aside from any question as to the dubious purposes to which this second term has been subjected in economic discussion, it is clear that it stands for an actual fact in individual experience.

unnecessary choices between competing presuppositions or competing schools of ethical theory.

Pantaleoni (*op. cit.*, p. 26), for example, discusses the question whether pleasure is negative pain, or whether, on the contrary, pleasure and pain are qualitatively distinct sensations, and inclines, on the whole, to the first, the positive-and-negative view, as the better explaining the experienced actual comparability and the patently actual commensurability of the two.

The better opinion seems to the present writer to be that pain and pleasure are multifarious, pain no more accurately the negative of pleasure than is one pleasure or one pain the negative of another pain or another pleasure; and that no item of pleasure is comparable or commensurable with any other, or with any pain item, and no item of pain like or unlike any other item either of pleasure or of pain, in any other sense than that all, as objective facts arousing liking or repugnance, must make their separate and respective claims upon the will, are thus brought under a common denominator of desire, and are commensurable with respect to the strength of the appeal which they make to choice,—the relative force of the competing desires to have or to avoid. "It is a simple psychological fact that, as we cannot know ourselves except in relation to objects from which we distinguish ourselves, so we cannot seek our own pleasure except in objects which are distinguishable from that pleasure, and which we desire for themselves. Desire always in the first instance looks outward to the object and only indirectly through the object to the self; pleasure comes of the realization of desire, but the desire is primarily for something else than the pleasure; and though it may gradually become tinctured by the consciousness of the objective result, it can never entirely lose its objective reference. The pleasure seeker is an abstraction; for just in proportion as we approximate to the state of the pure hunter for pleasure, for whom all objective interest is lost in self-seeking, it is demonstrable by the nature of the case, and shown by experience, that for us all pleasure must cease" (Caird, *Hegel*, p. 213).

"We can only have the highest happiness—such as goes along with being a great man—by having wide thoughts, and much feeling for the rest of the world as well as ourselves; and this sort of happiness often brings so much pain with it that we can only tell it from pain by its being what we would choose before everything else, because our souls see it is good" (George Eliot, *Romola*, III, 290).

Its best illustration is found in the falling intensity of the desires of any individual for any given sort of commodity at any given point of time. Successive increments of supply call forth a continually diminishing response of desire. But note that, if the case be not conceived as one of a succession of commodity items—if no item be regarded as coming early or late as compared with any other, but all as portions of a stock already in hand—it is no longer possible to regard any one item as entitled as against any other to the marginal place. Any item may stand as marginal in the sense that the loss of it would be felt as involving only the utility depending upon it, which utility would be equivalent to the utility of the last item in the series, were the different items acquired or considered successively.

It by no means follows, however, that each of the items is marginal because any one of them may be so. Not all of the items of a stock can be marginal at once. The utility loss that will be suffered in the loss of the entire stock is not the marginal utility times the number of items, but the utility of the entire stock conceived as a marginal stock. No one item can be regarded as marginal excepting on such terms of regrouping as shall impose the non-marginal quality upon all the others.[15]

It needs also to be clearly held in mind that in utility schedules we never get beyond the individual, and that marginal utility is purely a matter of the individual psychology. For different individuals there can be no

[15] Wieser appears to be of the other opinion: "The majority of theorists . . . . are agreed that these prices are fixed by a marginal law. We, however, have gone still farther, and say that value generally and in every form, even that of use, and even where there is no exchange . . . . must obey a marginal law. Jevons, Gossen, and Walras have not gone so far as to assert this. To these writers the utility of the separate portions or items of one supply is different according to the amount of use which each actually gives. . . . . I can scarcely hope to have converted him [the reader] all at once to such an unfamiliar aspect of the question" (*Natural Value,* p. 26, note.) But in another note upon page forty-four Wieser states the position again in a way to raise the query whether he is not talking about value rather than utility. In fact, in the second case he employs the word *value* for seemingly precisely the same meaning as was in the former case expressed by *utility,* the two statements together being perhaps mostly serviceable as illustrating the confusion of *utility* with *value* characteristic of Austrian discussion.

comparison of utilities either qualitatively or quantitatively. As including more than one individual schedule, there is, therefore, no possibility of a marginal service in the sense of the smallest service of a descending series; there is no series. That *A* will pay 30 and *B* 29 in no sense implies that the utility to *B* is to the utility to *A* as 29 : 30. One may be willing to give today for bread double what he would have given a year ago, though only equally as hungry today. The strength of his desire for other things is a necessary factor. Cases are, as we have seen, marginal, not in terms of absolute utility, but only of relative utility. A wealth of illustrations edifying to the point of weariness about the cigar and the loaf, Dives and Lazarus, the starving man and the man at feast, ought long since to have placed this truth beyond either the right or the danger of serious discussion, but have not done so. We still hear that stocks of goods in the general market may be ranged under one schedule with one margin of utility, and that the margin of utility both determines and is the market value for all the items of the market stock.

Thus, considered merely as the marginal item in an individual schedule, marginal utility becomes no more than vaguely quantitative—the assertion of a smaller utility than any other in the series. In no degree is it a measure of the absolute utility or of the precise ratio in utility which any item in the series bears to any other. To say that a certain utility is the smallest of a series does not imply anything about the size of this utility. The smallest potato in the bin may be a very sizable potato.

From the very fact also that the series is a series, and that the very law of satiation which it expresses requires that the items of the series be unequal in utility volume, there can be no term within the series capable of serving accurately as the utility measure of any other.

Nor is it more defensible to assert that the measure of the utility is to be found in money. To say that the limit price upon a horse for a would-be buyer is 30 means simply that at any price above 30 the bidder would prefer to reserve his purchasing power for other purposes. But it will not do to assert with the Austrians that this 30 measures the utility of either the goods or the horse. There is no such thing as measuring utility in money.

All that the price limit of 30 says is that, as between the utilities of two things purchasable at 30, to go as far as 30 for the horse is to reach the point of indifference. At higher than 30 something else is preferable. This 30 mark speaks as to the relative utility—to the particular individual—of horses and other things, but says nothing as to the absolute utility of the things compared. That John is taller than Tom tells nothing of how tall either is. Likewise, to assert an equality of utility between two things tells nothing as to the absolute utility of either. That all the potatoes in a bin are of equal size leaves everything in the dark as to the size of any of them.

It follows that the vague term *utility* gets quit of only one dimension of its vagueness in becoming marginal. Nor does the strictly marginal utility—the lowest utility of the series—do even this. It is only when a quantitative relation of utility is asserted with reference to a commodity outside the series—when utility becomes relative—that marginal utility, so called, can express itself in price limits or become relevant to the phenomena of exchange.[16]

[16] The general relation of utility to wealth and to value may now, perhaps, be mostly taken for granted.

Senior defines wealth as "all those things, and those things only, which are transferable, are limited in supply, and are directly or indirectly productive of pleasure or preventive of pain." Note the three requisites: (1) transferability, (2) limitation in supply, (3) advantage in terms of pleasure or of prevention of pain.

Enough has been, for present purposes, said of the pain-and-pleasure implications of utility. As to *transferability* it is to be objected that while it is evidently an essential condition to market exchangeability and thereby an important influence upon the utility of any good to its possessor, a thing may yet be useful without being transferable, and, if other conditions coexist, may have value to the individual. Jevons (*Principles of Economics,* Macmillan, 1905, p. 3) puts the case thus: "Transferableness . . . . is . . . . in most cases a question of degree. There are comparatively few things which, though useful to one person, are absolutely useless to another. . . . . An old family portrait may be more interesting and useful to the family than to other people; but if its painter is of repute and skill, it may, nevertheless, be valued by other owners. A rare edition may be almost priceless for the book-collector who wants it to complete his series, but it may be desired by other collectors with less warmth."

This is, truly, an accurate paraphrase of Senior (*op. cit.,* pp. 8–10) who is cited by Jevons with approval. But clearly enough, the talk here is not of transferability in any ordinary sense; the difficulty is not—so far as, in degree, there is any difficulty—that the usefulness cannot be assigned, but that there is none to be assigned; buyers could have, if, in their view, there were anything to be had. To others than the possessor, the thing in question lacks utility; they do not

The concept of marginal utility is, beyond question, of great significance in economic analysis, though as we have seen, and shall repeatedly have occasion to note, it is often most disastrously confused with marginal purchaser's price, that is, with *relative marginal utility,—relative subjective worth, subjective value.*

But evidently it is only the latter concept that has any part or share in the term value as a market category and expression of purchasing power. Value in this relational sense emerges only when utilities, as an individual category, have been, by different individuals, conceived relatively to other utilities to be displaced. For different buyers the relative utilities of horses to other goods, when expressed in terms of money as 30, 28, 26, etc., are purely personal estimates as to the utility of horses compared with the utility of the things which each buyer must forego in the event that he purchases a horse; and these are marginal estimates, since each expresses the purchasing disposition pushed to the point of indifference. Each of these money statements is, therefore, an expression of subjective value—

desire. But the next point made by Jevons, still following Senior, is valid: "The question, of course, is not one of mere physical transferability. There are some things, such as land, which cannot be handed about, but can only be transferred in legal possession. Other things, for instance, a beautiful voice, cannot be received or parted with."

And just as transferability is a condition neither to utility, nor to value in the individual schedule and in the relative sense, but is an essential only to exchangeability, so Senior's second requirement, limitation in supply, is accurately a condition not to the existence of utility but only of utility in the marginal items, or more accurately, to utility in all of the items of the stock; and as condition to marginal utility, and thereby to subjective worth, and thereby to the comparison of worths, it is finally a condition to the existence of market value.

There is, however, in the books, much confusion of utility with marginal utility; of this the following cases—entirely outside the Austrian sponsorship—may be cited as typical examples:

"At a given moment there is a given number of units and there is but one marginal utility, and this is the same for each of the units. It is quite erroneous to say that where there are 30 units, the utility of the tenth is 36: of the twentieth 25: of the thirteenth 19. It is equally incorrect to say that when there are 60 units, the 'total utility' is equal to the area between the right angle and—etc.," "while the value is equal to the rectangle, etc."—Fetter, *Principles,* p. 25.

From Seligman, *Principles,* p. 176: "At any given time the utility of each apple is equal to that of the last, and therefore to that of any of them."

And Seligman, carrying out the implications of this position, adds:

not subjective worth, but subjective *value,* a relational fact —money serving as mere equation sign between subjective worths of unknown size: $x=y$, with no notion as to the magnitude of either x or y. Mere *marginal utility*—subjective *worth,* for most purposes (but see later?)—expresses the utility that is lost in the loss of one item of stock. In *relative marginal utility,* loss in terms of something else, the thought is carried over into the field of value.

We are now ready for further additions to our equipment of terms. *Market value* is the objective resultant—the equilibrium point—of all the different subjective *values* implicated in the market. The marginal traders are those with whose subjective valuations the market adjustment

"The marginal utility of the stock . . . . is always equal to the marginal utility of the final unit multiplied by the number of units;"or as Fetter puts the same view: "The dependence felt by men on the group is the product of the units by the marginal utility" (p. 25).

It is of course to be objected that the service derived from the whole group of units, considered as an indivisible aggregate, or the loss which would be sustained by the loss of the entire group is something indefinitely greater—possibly infinitely greater—than the product of the marginal utility multiplied by the number of units. It is true that, taken separately, no one item can have greater importance attached to it than has the marginal item, since, when the items are considered separately, substitution is possible; but all the items have not the same utility. If it were really true that the utility of each item of a stock falls to the level of the last item, and if it were true that the total utility of the group is the product of the marginal utility multiplied by the number of items, there could never be any utility in any single item or in any group of items, so long as the supply were sufficient to allow any part of it to be free goods. That is to say, the view presented by Professor Seligman permits the emergence of utility only as the result of scarcity; and yet scarcity alone is not sufficient for value—else mosquitoes would be valuable in winter. What name shall serve to denote the other essential?

In a general way, the notion of utility is doubtless fairly clearly held in economic thought; and not much needs here be said in this connection. Jevon's statement of the case is in the main admirable:

"Most persons confuse the utility with the physical qualities which are merely the basis or requisite condition of the utility. The utility of gold, for instance, cannot be said to consist in its beautiful yellow color, its ductility, freedom from corrosion, and high specific gravity. If these qualities constituted utility, then gold would be useful even to the drowning traveler whose pockets are loaded with coin. The water of the river in which he drowns would, moreover, be useful, because its qualities remain the same as if it served the population of a town for drinking and washing purposes. As Senior briefly remarks:

most nearly coincides. For all traders other than the marginal there is an appreciable advantage accruing from the fact of exchange. These differentials—these distances of advantage between the sacrifice which would have been consented to, if imposed, and the sacrifice actually consented to—are the traders' *quasi-rents.*

It is not intended—it would, indeed, be most unfair, to imply that everywhere in Austrian discussion this aspect of relativity fails of adequate recognition, or that it does not occasionally receive expression at the hands of Boehm-Bawerk. One wishes merely that this recognition had been consistent and firmly adhered to, especially in such authoritative treatises as have been translated into English. But,

'Utility denotes no intrinsic quality in the things which we call useful; it merely expresses their relations to the pains and pleasures of mankind.' "

Aside from the distinctly hedonistic tone of this formulation, one could improve it only by extending its scope; for it seems to be the truth that no quality or attribute—utility or other—is really intrinsic; just as, psychologically considered, sound is not an aerial vibration drum-beating upon the organs of auditory sensation—but the subjective effect or interpretation of the external phenomenon; and just as heat and light and color are psychological significances derived from what —supposedly—are objectively mere etherial waves—so all the so-called qualities are such only as reported to the mind through a reporting mechanism, and as modified and conditioned by the nature and limitations of this mechanism, and as interpreted according to the activities and capacities of the recipient-percipient mind. The ultimate truth is, then, that, like utility, all these qualities are such only in the sense of relations between the objective fact and the human consciousness; there is no place for "intrinsic" qualities anywhere, unless as expressive of the faith that there is somewhere a reality in itself lying behind and upholding the reality as it appeals to us.

But in view of all this, and of the further truth that all thought must run in terms of relation, what does it mean to speak of an absolute magnitude of feeling? There can surely be intended no denial that in expressing or estimating or appraising the feeling, it must be thought of as an experience, and must be understood and appreciated in the light of other experiences; nor is it denied that, for any purposes of thought or of action, the feeling must be considered with reference to its setting of experiences, and in relation to experience past and experience to come. But by the very necessity of this relativity in the nature of thought, it is all the while implied that different somethings in sensation or feeling exist to be related. Before things can be understood, compared, related, thought of, they must first be. Thus before a feeling can be decided to be greater or less than another, more or less desirable, similar or different, it must have been experienced

with the accepted terminology of the school, neither consistency of doctrine nor clarity of exposition was readily possible. But more of this later. Our present interest is in the working-out by Boehm-Bawerk of the relation between subjective *Wert* and market value.

Price in German usage indicates merely the *quid pro quo* of exchange. When the exchanged good is money, it is accurately to be called the money price. Careful attention to this fact is essential, if misinterpretation is to be avoided by English readers.

Fundamental to exchange are, according to Boehm-Bawerk, three assumptions: (1) There can be no exchange except where exchange brings advantage; (2) the larger is

separately, and in this sense, absolutely; it can be a term in a relation only on condition of having a separateness, an existence outside the relation. One's first experience of any sort must contain its own quantum of discomfort or of satisfaction; it does not need that one have stepped on my toe twice, in order that I come to have a first feeling experience. If pain or pleasure could exist only with a second experience, neither could ever exist at all.

True, one could not appreciate the experience as like or different in relation to another, unless upon the assumption of preceding experiences with which to put the current experience into relation, but he could nevertheless have the current experience and, feeling-wise, approve or disapprove of it. It is in this sense that we may speak of an absolute magnitude of feeling.

Nor is there question that in the process of putting these feeling magnitudes into relation, in deciding between them, making comparisons of them, some development or modification may take place in the terms or in the completeness of the separate appraisals. It is rare that one knows precisely how much he would pay for a thing more than he actually does pay; he has never carried the processes of appraisal, comparison, and computation farther than to know that the commodity in question signifies to him more than the *quid pro quo* to be foregone. But more and more as the needs of action require, and in the process of deciding to act, or in the process of acting, these separate and absolute magnitudes of feeling acquire clearer definition, both relatively and absolutely; and it is probable that in the process of comparison, the act of thinking things into relation, there may be some reaction of one term in the relation upon the other, to modify the appraisal of each, not merely in point of precision, of definition, but also qualitatively. But not the less must there be two separate feeling magnitudes to be compared, between which a relation is to be established and a choice declared. These absolute magnitudes, these to-be-related significances, are of the general nature, the raw material, of subjective worth.

preferred to the smaller advantage; (3) the smaller is preferred against no advantage.

Exchange therefore presupposes that for each trader the obtained good affords a greater utility than the good foregone, so that, "since the significance of goods for well-being expresses itself as subjective value (worth), the obtained good possesses a greater subjective worth than the released good." [17]

It follows that "an exchange is economically possible between persons only who appraise commodity and price good differently—in fact, in reverse order. . . . . One must appraise the good higher, the other lower than the price good." [18]

Now, is it true that the good parted with and the good received must have the same value—*Wert*—since they exchange against each other? In the subjective sense, in the purely personal appraisal of the traders, no; for each man the worths compared must be unequal to the degree at least to tip the scales of choice.[19]

Here, it is to be remarked, is surely adequate recognition of the necessity of getting two subjective worths into comparison, into a subjective-worth ratio, that is to say, into a subjective valuation, before either a price offer or a refusal price can be reached, and any subjective value come to exist in that relational sense affording a possible key to market value; but in all the Austrian prodigality of terminology there is no term for this valuation *relation* between subjective worths. And note that for any trader, even that one nearest the margin, some quasi-rent is asserted; market price can never quite express any marginal demand; as a ratio, market value is never quite coincident with the marginal purchaser's ratio between marginal utilities. Marginal buyers and sellers are those who, at the market adjustment, approach nearest to indifference,—whose utility-ratios between goods obtained and goods foregone are nearest to being expressed by the 1 : 1 ratio: "That bidder is the strongest [*tauschfähigste*] who appraises his own good lowest relatively to the good offered, or, what amounts to

[17] Boehm-Bawerk, *op. cit.*, p. 480. [18] *Ibid.*, p. 490. [19] *Ibid.*, p. 490.

the same thing, appraises the offered good highest relatively to his own." [20]

And here follows the familiar illustrative scheme—with the horses—for the working-out of the price adjustment, a method too familiar to require attention for present purposes; but it is nevertheless worth remembering that it is all worked out in terms of money against goods.[21]

From this analysis several principles are deduced:

Which of the bidders succeed in trading? The five buyers who appraise the horses highest, and the five sellers who appraise the horses lowest.

But here again the relativity is forgotten; the appraisal cannot be in terms of mere subjective worth, else no exchange could be deduced as possible. The lowest and the highest should have been expressed as relative to the medium of exchange, or as relative to the price commodity on the other side. Simply as an expression of marginal utility, nothing is to be arrived at.

The height of the market price is limited and fixed by the height of the subjective worth estimates of the two marginal pairs.[22]

The unfirm grasp of the relativity principle is at this point suggested by the vague and halting quality of the statement; worth appraisals or worth estimates (subjective *Wertschätzungen*) can rightly mean not mere recognitions of subjective worth, but valuations of subjective worths, comparisons made between subjective worths.

And it is further to be objected, (1) that the formulation misconceives the relation of the marginal traders to the other traders and to the process of price adjustment; the marginal buyer or seller shows merely the degree or extent in which he, or any other trader, has individually affected the market outcome; (2) not the two marginal pairs, but one marginal pair, not four persons but two, give the breadth of the margin interval within which the price is indeterminate and left to higgling for its adjustment. A point may easily be fixed between two points; but precisely how a point shall be fixed between four points is not readily clear.

[20] Boehm-Bawerk, *op. cit.*, p. 491.

[21] *Ibid.*, pp. 493–96. [22] *Ibid.*, p. 501.

All of this process and the outcome of it trace back, Boehm-Bawerk asserts, to subjective value (*Wert*) as the ultimate explanation:

> The relation between commodity and price good is it [which distinctly is not subjective worth, but a relation between subjective worths] that decides the individual to take steps looking to an exchange, decides as to the degree of the exchange disposition, decides sharply up to what point the interests of each bidder will lead him to compete, and likewise the limit at which, as outbidden and excluded bidder, he must retire from the competition; decides in its further effect who, in the scale of strongest bidders, will succeed in trading, to whom the rôle of marginal pair [note the singular] will fall, and thereby also the height of the price at which the exchange shall take place.[23]

Subjective worth does, in fact, none of these things; and even the subjective valuations do not do the last. But forthwith the exposition relapses into accuracy:

> We can with entire precision describe the price as the result of subjective worth appraisals of commodity and price good, as these appraisals meet each other upon the market.[24]

Nothing having yet been said as to the relation of demand and supply, we have now to inquire "from what circumstances it is decided whether the worth-appraisal level [*Schätzungsniveau*] of the marginal pairs is high or low." [25]

There are four forces or facts making for the determination of the price: (1) the nature of the demands directed upon the commodity; (2) the height of the appraisal figures (*Schätzungsziffern*) on the part of the buyers; (3) the number of wares for sale; (4) the height of the appraisal figures on the part of the sellers:

> But . . . . our appraisal figures are not simple magnitudes. They are in no sense simple data as to the absolute magnitude of the subjective *Wert* which the commodity has for the appraisers, but rather they are relative quantities derived from the comparison of two separate *Wert*-appraisals, the appraisals of commodity and of price good. In saying that *A* appraises a horse at 200 florins, we have said and implied nothing as to what absolute importance

[23] *Ibid.*, p. 503. [24] *Ibid.*, p. 503. [25] *Ibid.*, p. 509.

the possession of a horse has for *A* but, on the contrary, we have merely expressed the relation in which the *Wert* of the horse stands for *A* in relation to the *Wert* of the money-price.[26]

It must be admitted that this is accurate, adequate, and admirable; and if the terminology were adapted to the doctrine, and the doctrine adhered to without vacillation, and were the exposition consistent and free of confusion both of thought and of terms, nothing better could be asked for, so far as this aspect of value doctrine is concerned. But it is equally true that so stated and interpreted, no Ricardian would ever put the doctrine in issue, excepting possibly as to the importance of the conclusions and the justification of the attendant much talking. The Ricardian is, as we have seen, overdisposed to assume that the demand can be taken for granted, without analysis and without saying.

But Boehm-Bawerk also, under force (3), "the number of wares for sale," recognizes that cost influences await investigation.

COST OF PRODUCTION

In truth, the Austrian analysis of subjective worth has not yet been fully presented. Bearing in mind that "a good which one already has he appraises according to the loss (*Einbusse*) which he would suffer by the loss of it," [27] a principle of substitution has to be recognized. The loss of any particular good, say of an overcoat, is not commonly to be measured according to the utility of the overcoat, but according to the utility of the good which will have to be foregone in order to replace the overcoat.[28]

It is by virtue of this doctrine of substitution that goods of highest necessity, food, clothing, and the like, command so limited an appreciation in point of worth. But obviously the principle does not apply when the loss, if shunted off, would fall upon something not less but more important; when, in short, the lost good is itself marginal. Substitution through reproduction really falls under this general

[26] Boehm-Bawerk, *op. cit.*, p. 509.

[27] *Ibid.*, p. 33, note.

[28] *Ibid.*, p. 36.

principle of substitution, and furnishes the theoretical basis for the bearing of costs upon subjective *Wert*. The loss is always that smaller loss into which the loss in question may be translated.[29]

There is no objection fairly to be made here; the valuation process is unquestionably of the sort stated. But it is none the less in point to note the necessary implication that, whatever may be the truth as to market value, subjective value (*Wert*) is hereby made a question not of marginal utility but of marginal cost, marginal displacement. Subjective *Wert* is then badly presented when, as over and again in Austrian discussion, it is made exclusively a question of marginal utility. When, for an overcoat, for which, by virtue of its utility, one would pay if necessary $20, one actually pays only $10, he is justified in placing the value of the coat at $10; but not the utility; the utility is still the twenty-dollar quantity, and the purchaser's differential, the utility gain, the quasi-rent, is thus $10, simply because the coat had and retains a marginal utility of $20. And thus the strange outcome of all this discussion appears to be that marginal utility, or, more accurately, subjective value, as value determinant presented as unrelated to cost and as fundamental to cost, is itself finally resolved into cost. But however this may be, it is clear that, in accurate analysis, marginal utility should remain one thing, and the marginal cost of the marginal utility,—its subjective value, its worth,—should remain another and a quite distinct thing. On any other terms all is confusion, all utility becoming marginal in a general mish-mash of costs. For if marginal utility and cost value are one, there can be no utilities that are not marginal; all the similar items of a stock must be of equal marginal utility, equal subjective value, and equal market value; therewith disappears all possibility of the explanation of value by margins.

And so when Wieser says that, "in Paradise nothing would have *Wert* but satisfactions," it is immediately to be added that satisfactions also would not; they would have utility and relative utility, but no marginal utility and no value, either of the subjective or of the objective sort, simply "because there one could have anything."[30]

[29] *Ibid.*, p. 39.

[30] Friedrich von Wieser, *Natural Value*, edited by William Smart, translated by Christian A. Malloch, Macmillan, 1893, p. 20.

But the Austrian doctrine of costs will best be considered in another connection. The task now at hand is to present the concept of subjective *Wert* with such adequacy and definiteness as the nature of the concept permits. To this end extended reference will be necessary to the *Positive Theory*.[31]

At all events, it seems from the analysis so far as at present carried, that even in marginal utility, strictly interpreted, there is nothing but utility, and this without any pretense of a measure for the utility set up, unless it be in the utility of some non-marginal item; and all we can then say is that it is the less useful of the two.

Recalling that Say stood distinctly for the measure of utility by value, rather than of value by utility, one would like to know whether anything is made in Austrian theory of this distinction. According to Boehm-Bawerk, "The measure of the utility which depends on a good is, actually and everywhere, the measure of value for that good." [32]

And again:

> The value of a good is measured [Die Grösse des Wertes eines Gutes bemisst sich] by the importance of that concrete want or partial want which is *least urgent* among the wants that are met from the available stock of similar goods. What determines the value of a good [ist für seinen Wert massgebend] then, is not its greatest utility, not its average utility, but the least utility, ... the economic marginal utility of the good. . . . . The value [Wert] of a good is determined by the amount of its marginal utility [nach der Grösse seines Grenznutzens].[33]

Merely stopping to note that the meaning of value is here again referred to marginal utility as distinguished from the cost or displacement attendant upon marginal utility, we ask ourselves what is meant by saying that value "is determined" by the amount of the marginal utility,

[31] Eugen v. Boehm-Bawerk, *The Positive Theory of Capital,* translated, with a preface and analysis, by William Smart, Macmillan, 1891.

[32] *Ibid.,* p. 139. In the original the passage reads: "Das Mass des abhängigen Nutzens ist wirklich und überall auch das Mass für den Gutenwert."—"Capital und Capitalzins, zweite Abtheilung," *Positive Theorie des Capitals,* Buch III, Abschnitt III.

[33] *Ibid.,* p. 148.

more than merely that value is marginal utility? But that there is a difference is to be inferred from the earlier statement that the *measure* of the marginal utility, the transformation of it into subjective worth, is to be traced to the purely psychological and subjective feeling-state attendant upon the existence of the want situation of the individual relative to the good; all of which must mean that the psychological emphasis, the significance for feeling, constitutes the subjective valuation, the non-relative worth appraisal of the marginal utility, its expression.

So far the doctrine is parallel with that of Say, excepting that, with Say, the talk was purely and solely of market value, and that, with subjective value, *Wert,* the notion is rather one of the expression of value than of the measuring of value. Subjective value, as such, implies no measure, is not expressed in equivalents, and stands for an absolute magnitude of feeling.[34]

In Boehm-Bawerk's treatment of substitutionary utilities, in the *Positive Theory,* he returns to the overcoat illus-

[34] It is also to be said that here, as elsewhere in Austrian discussion, there is difficulty in being certain of one's justification in interpolating the word *subjective* or any sign that subjective worth is intended,—to be sure that, after all, the statement in hand is not intended to apply as well, or even exclusively, to market value. That this discussion is found in the chapter on "Subjective Value" does not guarantee that the thought may not drift into market-value waters. Thus on page 152, after discussing the subjective value of a sack of corn out of a farmer's stock of similar sacks, and after attaching this value to the marginal utility of the final sack,—clearly an absolute magnitude,—Boehm-Bawerk proceeds: "Transfer now the field of illustration from the solitary in the primeval forest to the bustle of a highly organized community. . . . . The more goods there are of one kind in the market the smaller . . . . is the value. . . . . The more individual goods there are available in any class, the smaller is the marginal utility which determines the value."

That there can be no such thing as a market marginal utility, but only a market marginal purchase price, does not need repeating, unless, indeed, the assumption is tacitly made that all purchasers are precisely alike in point of subjective situation and of purchasing power. But this is merely another case of the confusion, chronic in Austrian discussion, of marginal utility with market value and of subjective value with objective value. If the Austrians cannot keep their categories separate, it is idle to expect others to do so. And so Hobson, doing yeoman service against the straw-man doctrine that marginal utility determines or is market value, appears to achieve an easy victory over Boehm-Bawerk by merely quoting from page 159 of the *Positive Theory:* "The fewer and the less urgent the wants and the more goods there are to satisfy them, the deeper down the scale

tration: "I shall try to shift the incidence of the loss onto other lines of goods," sell some of them, or drawing upon my stock of cash, go without something that I had intended to buy, or I shall economize in household expenses, and only in case of extreme need go without an overcoat. "Only in the last case is the *Wert* of the overcoat determined by the immediate marginal utility of its own class. In most cases it is determined by a substitutionary utility." [35]

But again it is to be objected that this getting to the margin by the method of substitution is not to find the utility of the final item of the stock in question, or the utility of the single item under consideration, but only the cost of it, and thereby the subjective significance, the worth of it. And in either case, whether away from the margin or upon it, the worth as matter of subjective estimation obtains no expression in terms of something else, that is to say, receives no measurement, but is merely a statement of the absolute magnitude of significance to the individual well-being, and therefore is a relative quantity only in the sense and to the extent that it has a place higher or lower in the personal list of absolute feeling magnitudes.

Wieser is as obtrusively hedonistic in his point of view as is Boehm-Bawerk or as were any of the classical school; but the validity of his doctrine is not made to stand or fall thereby:

> What is it that gives value to the satisfaction itself we shall not attempt to explain. It will be enough if we give the symp-

goes the satisfaction and the lower falls the marginal utility and the value. It comes nearly to the same thing, only in a less precise form, to say: Usefulness and scarcity are the ultimate determinants of the value of goods."

Upon which Hobson remarks (*Economics of Distribution*, p. 106): "Now, not only is scarcity thus fetched up from the supply side of the equation as a determinant of value separate from utility, but it is made the determinant of marginal utility itself, for 'it is the scarcity that decides to what point the marginal utility actually does rise in the concrete case'" (*Positive Theory*, p. 160). And Hobson is pardonable for not seeing that Boehm-Bawerk is talking here about the individual schedule and the purely personal bearings of wants and provision for wants, that is, that the discussion is not in the market-value field but only in the subjective field.

[35] Boehm-Bawerk, *op. cit.*, p. 156.

toms by which the degrees of value or importance are recognized. It is the intensity with which the satisfaction is desired;[36]

which sufficiently cuts loose from all hedonistic complications.

Not free goods but only economic goods can have value; and so Menger's definition is approved by Wieser: Value is "the importance which concrete goods, or quantities of goods, receive for us from the fact that we are conscious of being dependent on our disposal over them for the satisfaction of our wants." [37]

But as Wieser elsewhere remarks, "Menger has a complete system of subjective value but makes no attempt to develop objective value." [38] This, therefore, is not to be understood as a definition of market value.

This definition, however, as adopted by Wieser, is found near to the beginning of his treatise, before any discussion of subjective value (*Wert*) has been attempted, and is formulated as a general definition of value. And so upon page twenty-four, as the title of chapter ix, we read, "The Valuation of Goods in Stocks. The Law of Marginal Utility the General Law of Value." And the chapter itself discusses collectivist valuation, in which, evidently, there is no such thing possible as marginal utility in any accurate sense.[39]

[36] *Natural Value*, p. 7. [37] *Ibid.*, p. 21. [38] *Ibid.*, p. 54.

[39] These confusions must, in the interests of space, be rather instanced than fully reported or adequately discussed.

Confusions of utility with marginal utility; and with price:

"In a word, the value of a supply of similar goods is equal to the sum of the items multiplied by the marginal utility."

Now while this would perhaps be true, were the question one of market value, it is distinctly untrue, as a question either of aggregate utility or of aggregate subjective worth, that is, the subjective worth of the group conceived as a whole, a unit; but, still within the collectivist computation, the discussion proceeds: "A harvest consisting of 1,000,000 quarters, is short . . . . so . . . . that grain dare not be consumed unless the act of consumption yield a satisfaction equal to the figure 10 [10 what? At any rate a social marginal utility]. The value of the harvest will be calculated as 1,000,000×10."

"The various things that determine money value to the individual are the following: . . . . the amount of money which is at his disposal; the nature and quantity of the goods which can be obtained

On page fifty-one we read:

When we speak generally of the value of goods we mean the economic rank given them by their prices. . . . . Some particular designation is indispensable for the ranking of goods in economic exchange, and it is impossible to find any other designation than that of *Wert*. . . . . The word *Wert* alters its original sense somewhat when transferred from the subjective relation to wants to the objective relation to price. Subjective *Wert* represents a distinct feeling; that of being dependent upon the possession of a good for the satisfaction of a want—a distinct degree of personal interest in goods. . . . . Objective *Wert* or price is not in the least the expression of the economic valuation of goods, even when it is the result of economic competition, and of the individual valuations of all the different members of the economic community. Price is a social fact, but it does not denote the estimate

under the existing market conditions and prices; the utility [marginal] which these goods are able to give, as also the utility already secured by possessions otherwise acquired; and, lastly, the urgency of demand" (p. 46).

"In each kind of production good, taken by itself, the value of the product is adjusted to the level of its particular marginal utility" [intended as a collectivist computation, with a collectivist marginal utility; but what about displacement and cost here?] (p. 97).

Confusions of marginal utility with subjective value, and with demand price:

"The law of value [market value here, as the context shows] unites the conceptions of value and of utility in a way which is fully confirmed by the facts: . . . . and it only remains for us now to combine the fact of costs with the law of marginal utility" (p. 26).

"The law of price is nearly related to the law of value. The value of a stock consisting of separate items is determined as a marginal value, according to the marginal utility of the single good." [Seemingly a subjective-worth computation for one consumer; in such case, not the whole stock, but only any one item gets valued in the way asserted.] "The price of a stock which is sold in separate items is also determined as a marginal amount, according to the purchasing power of the marginal buyer of the single good" (p. 43). [Here there is careful avoidance of making price and marginal utility equivalent; price is marginal purchasing power; but on page forty-seven it is said that, whether for goods or for money, "it is demand and supply, as these express themselves in marginal utility, that decide the exchange value."]

"The estimate of value [here evidently subjective worth] leads us back to use value, and again the law of marginal utility holds" (p. 48).

"The rich man, therefore, will not value his coat according to its utility, but according to the cost of procuring it; in his estimation this cost will stand lower than the utility. . . . . All household goods, which when lost or stolen, can be replaced by purchase, are thus valued" (p. 49).

put upon goods by society. . . . . Relations of price and of objective *Wert* do not in the least correspond with the relative position of the two goods in regard to their economic *importance* or *subjective* valuation. . . . . [But] exchange value taken by itself and unrelated to subjective value is unintelligible. . . . . To explanation, subjective value is chief in importance because only through it can exchange value be reached.

All this is admirable; but turning back to page thirty-four before there had been any talk of subjective value or of subjective anything, but only of value as referring to general market transactions, we read:

Value is the form in which utility is calculated. . . . . It is difficult indeed to estimate the utility of a stock; easy to estimate its value. That is to say, the value of a stock can be expressed as the single product of stock and marginal utility; it is a multiple of the marginal utility; whereas utility can be expressed only by a sum which contains as numerous and as various amounts as the stock contains items.[40] The utility, for instance, of a harvest of a million quarters can be represented only by an almost inexhaustible description of all the benefits accruing from it. . . . . The value of the same harvest is easily and shortly ascertained by multiplying the utility of the marginal employments by the whole amount.

But on page sixty-two better doctrine is found, doctrine also of the highest of importance as putting the finishing touches to our present discussion:

In natural value [ideal collectivist value] goods are estimated according to their marginal utility; in exchange value, according to a combination of marginal utility and purchasing power.

Passing over the objection that there can be no social marginal utility in any other than a rough average sort, it is of supreme importance to note that here is an abandonment, as complete and unambiguous as that with Boehm-Bawerk, of marginal utility as value measure or value determinant. No matter how frequently Wieser has asserted and will assert the contrary, there is no understanding of the real force and meaning of the Austrian

[40] That the value of a stock is the product of marginal utility by the number of items can from no point of view be true unless by interpreting marginal utility into marginal cost or marginal value, as in fact Wieser, like Boehm-Bawerk, does; marginal utility, marginal cost, marginal utility value, and subjective value, all appear to analyze into the same thing, and exchange value also is prone to edge its way in.

doctrine without accepting this truth. The point of view does not make for marginal utility as the gist of the value concept or as underlying it, otherwise than as an intermediate step toward arriving at the purely explanatory and tributary concept of subjective worth. Exchange value, estimated or expressed or fixed or worked out "according to a combination of marginal utility and purchasing power," becomes not marginal utility or marginal subjective valuation, but marginal relative utility, that is, marginal sacrifice, marginal buyer's offer price, or marginal seller's demand price.[41]

SUBJECTIVE EXCHANGE VALUE

Subjective exchange value is defined by Boehm-Bawerk as "The importance which a good obtains through its capacity to procure other goods by way of exchange."

In view of the non-relativity of the concept of subjective value, there is nothing further to be urged here against the use of the term *value* for this new concept; and, in the

[41] It may by this time be taken as established that neither in pain nor in utility, whether as value determinant or as value denominator, is there any place of abiding or hope of rest for the investigator of value. But even were it otherwise, were it in any way possible, cause-wise or denominator-wise, or both, to resolve value into a homogeneous medium of pain cost or of utility demand, what, after all, would it all profit?

The scientific instinct for unification is undeniably strong; to it, indeed, is traceable the larger part of all accomplishment in thought and in research. When, if ever, the ultimate atom or electron of matter is discovered, or, in the tentative manner of scientific generalization, is credibly assumed as a working hypothesis, the fact will be one of no small moment, even though everything be yet to learn as to the ultimate nature of this ultimate atom. So also, were it really necessary and at the same time credibly possible and approximately intelligible to accept or to suppose a social pain unit or a social pleasure item, or did it in any sort advance the case to compute some average level of pain experience or of pleasure experience and to conceive of this average level as homogeneous in a degree to permit of some typical or normal or standard or average unit-resultant, and were there no other method of making intelligible and manageable the phenomena with which economic science has to deal, and were the new fields of research thus thrown open for entry as attractive as the old fields made necessary of abandonment,—the pain-jelly or the pleasure-jelly hypothesis—it not at all mattering which—would impose itself upon our acceptance.

But it is first to be noted that the entire marginal analysis, for whatever it has accomplished and for whatever it promises, would be first among the things to be abandoned; and this would involve not

German, *Wert* may be the only resource for the case, if there is occasion or justification of any sort for the new concept. The use of the new term seems to have been responsible for the adoption of *objective exchange value;* there being, by assumption or enactment, a subjective exchange value, the interests of symmetry now impose a longer and more cumbersome term in place of market value, but with no added significance, other than that of contrast with subjective exchange value.

But the fact appears to be that "subjective exchange value" is absolutely without serviceability in the value investigation; it is a case of purely gratuitous distinction-drawing and term-making, and this in face of Boehm-Bawerk's oft-quoted confession that he "would gladly exchange these pedantic and clumsy expressions, etc.; . . . . but . . . . use value and exchange value are not suitable at all, because, as we shall see, there is a subjective exchange value." [42]

merely the loss of those contributions distinctly to be credited to the modern movement, but also the entire Ricardian land-rent doctrine, and together with this the complete scheme of marginal cost in its relation to value.

But, finally, what is it that this labor-jelly or pain-jelly or utility-jelly hypothesis can offer us? In no sense a homogeneous medium into which all costs or all services may be resolved, but a homogeneity supposedly actual and valid only for the marginal cases. The truth is, then, that nowhere are the glittering promises in the way of being kept; the thing that is tendered is not the thing held out as in prospect. Nor is there offered any substitute for the thing promised, but rather a relinquishment of it; for of what service would be this mere fringe of homogeneity at the lower edge of the wide value tract? How does any alleged general value *determination* by the marginal-cost item come to recommend itself to be a resolution of all the non-marginal cases into an equality in pain origin or in service offering? In its very terms, this solution turns out upon examination to be a no-solution.

But if it is indeed true,—and it is no part of the present purpose to deny it,—that for the various and different market demands to come jointly to bear upon market value, they must find a way to get themselves aggregated; and if it is true that costs as bearing upon value must likewise become comparable and, for the purpose, homogeneous; and if men imperatively need in their commercial affairs some generalized form of value expression, a language, a standard, a denominator, it is fairly to be urged that in the system of price-offer, price-refusal terms, a money-price rendering of value, and a money standard of deferred payments, the precise thing required is offered and is attained. More cannot be had, and were more to be had, there would be no need for it.

[42] *Positive Theory,* p. 130, note.

But the adoption of the new term is more than merely gratuitous; it is bad in logic; it involves the absurdity of asserting that the utility of the cow that you sell is, after all, not the utility of the cow, but the utility of the horse which you receive in return. And doubtless this is true in a sense, though it seems to leave the cow strangely bereft of any utility whatever, unless perhaps that previously contentedly possessed by her, but now repudiated and cast off, or, possibly, appropriated by the horse. This recalls the procedure by which the utility of the overcoat was suddenly reduced from 20 to 10 by the mere fact that it could be had for 10.

The truth appears to be that the notion of quasi-rents, buyer's or other, is sufficient for all cases presenting this aspect of the differential principle. And the concept indicated by the term is really needed to explain the demand for goods, the forward-looking attitude toward exchange, and the degree and kind of the purchase-elasticity.

Let it, for example, be taken as true that, having no coat, one would, if necessary, pay twenty dollars for a coat, but needs pay only ten; or that, having a coat of a twenty-unit power of service, one could, if he lost it, replace it at ten. Doubtless one may say that the subjective worth is 10, but this 10 is obviously not well adapted to serve as an expression of the bidding disposition; 20 is still the maximum bid; to place the utility at 10 leaves it strangely standing as true that one is willing, if necessary, to bid the price up to twice the utility.

But this is not the worst of the bad logic. Subjective exchange worth, like marginal utility and subjective worth, must justify its existence in economic terminology through its service as tributary to the explanation of market value,—as a term, standing for some intermediate analysis subsidiary to the elucidation of the problem under investigation. On any other basis each of these terms is an impertinence.

But unfortunately for subjective exchange value, it is an *ex post facto* concept, a term derivative from the exchange transaction, and expressing the advantages derived from it; as such, it loses all importance as helping in the explanation of the terms of the exchange. It substitutes the backward-looking view for the forward and recalls little Alice of the looking-glass experience, who used to cry before she had cut her finger, and having cut

it, laughed, the pain being over; and who occasionally lost much time rapping upon the door to get in when she was in already.

Both Wieser and Boehm-Bawerk stand for the subjective-worth concept. And Wieser applies here something like the foregoing logical methods in his attempt to demonstrate not merely that subjective worth is a necessary concept in the elucidation of market value—as in fact it is—but that it is adequate thereto—as in fact it is not. Without this absolute-magnitude kind of value for each of the two things to be compared, there could, he rightly argues, be nothing to compare. Each must be worth-estimated separately, and then a comparison of them made, before, as a result, a readiness for exchange may be reached. The exchange advantage expresses itself as the greater absolute magnitude of the so-called objective exchange value over the direct—the subjective—value. True, the comparison is ordinarily made through money; but accurately the subjective exchange value of my cow is not in the money, but in that which I shall purchase with the money, e. g., a horse, regarded in its aspect of direct subjective value, as an absolute satisfaction magnitude.

And so, by finding two subjective values, by comparing them, and then attributing the second value to the first, thereby returning to a non-relative fact; having, that is, once used the relationship and then dropped it, or lost it by absorption, Wieser concludes that he has all the while been within the field of absolute magnitudes.[43]

[43] *Natural Value,* pp. 50, 53, note.

CHAPTER XVIII

CLASSICAL VERSUS MODERN (DIETZEL VS. BOEHM-BAWERK)

It is commonly stated that in the early seventies three different investigators, Menger, Jevons, and Walras, working independently and in different languages, arrived at practically identical positions in their reformulation of economic doctrines. That there was practical identity in point of view—in the emphasis on demand as against supply, and upon utility as fundamental to cost—and that the marginal method in the analysis of market adjustments was common to all three, must be admitted; and this is a degree of similarity sufficiently remarkable.

But the divergencies were important enough to influence greatly the subsequent development of the derived lines of thought. Jevons made only slight attempt at analysis of the phenomena of individual valuation, and, whether for better or for worse, is only in the slightest degree responsible for the beginning and the growth of the doctrine of subjective worth. For the most part, Jevons' work was in the field of market value, and especially of the distributive categories derivative from the value concept. Menger's work is, on the other hand, mainly restricted to the field of subjective valuation and subjective value—worth in the individual schedule.[1]

[1] Jevons and Walras are on the whole much alike both in point of view and in method of treatment; for the purposes in hand their positions are, indeed, practically identical; that is to say, neither does anything of appreciable significance distinctly within the field either of subjective worth or of subjective valuation in the accurate, the relative, sense. Both directed attention especially to the marginal analysis, and, without attempt to examine into the precise nature of the margin, employed the principle of the satiability of desire as explanation of the principle of marginal utility in the demand curve. As against himself, Walras accords priority in time to both Gossen and Jevons, so far as refers to the leading principles of the method and to the point of view, but regards himself as having made some fields of

The later doctrine has been developed mostly along the lines of Menger's analysis, and chiefly by his convinced

the development and the application of the theory peculiarly his own: "This half-volume was, indeed, prepared and almost entirely printed, and I had communicated the main points of the theory herein expounded to the Academy of Moral and Political Sciences at Paris, when, a month since, I made the acquaintance of a treatise upon the same subject, entitled *The Principles of Political Economy,* published in 1873 . . . . by Mr. W. Stanley Jevons. . . . . Like myself, this author applies the mathematical analysis to pure economics, and especially to the theory of exchange; and—a truly remarkable fact—bases the entire reasoning upon a fundamental formula, which he terms the *equation of exchange,* which is rigorously identical with that which has served me as point of departure, and which I call the *condition of maximum satisfaction.* Mr. Jevons has especially directed his attention to the general and philosophical exposition of the new method and to laying the foundations of its application to the theory of exchange and to the theories of labor, of rent, and of capital. As for myself, I have made especial effort to make thorough exposition of the mathematical theory of exchange. This leaves me in duty bound to ascribe the priority of formulation to Mr. Jevons, the while reserving to myself some claim to several important deductions. . . . . In my opinion, Mr. Jevons' work and my work, so far from antagonizing each other, confirm and complete and essentially strengthen each other."—Leon Walras, Preface to *Elements d'Economie Politique Pure,* 4th ed., 1900.

There is, then, from the point of view of the present investigation, no especial call for detailed report or criticism of either Jevons or Walras. Their mathematical forms of statement and method of investigation, if there really be a separate method, serve to make the task one as impracticable for the present writer as it would probably turn out to be unserviceful to the reader.

Walras' rendering of the marginal-utility doctrine makes a distinction between extensive utility and intensive utility; a commodity has extensive utility up to the point where no more of it will be consumed even upon terms of being offered gratis; intensive utility is the sort of utility that influences the demand curve (*ibid.,* p. 73). "We call the utility intensive because of the fact that the commodity responds to needs more or less intense and pressing, accordingly as, with a greater or smaller number of men, these needs persist, despite the height of the price, and persist more or less strongly with different men; because, that is to say, the importance of the sacrifice to be made to procure the commodity has more or less influence upon the quantity of the commodity consumed" (*ibid.,* p. 73).

All of which amounts to reducing the different demands of different individuals to a homogeneity of utility; thence comes the interpretation of the demand-price curve as a mere intensity-of-utility curve.

Based upon this line of reasoning, the further development of the

pupils or disciples. Therefore, in the interests both of effectiveness of exposition and of economy of space, it has

marginal-utility analysis is easily foretold; market value and marginal utility become coincident quantities.

But it is still to be noted that all of this analysis proceeds upon the assumption of existing and temporarily fixed supplies of goods, that is of goods unaffected, for the time being, by influences of cost. This was also the method of Jevons, the further problem being to analyze and formulate the cost influences in their relation to supply. Walras, as it seems to this writer, gets not much farther toward the solution of the problem than a more or less inadequate formulation of it: "In a word, it remains to decide whether it is the price of the productive services that determines the price of the product, or rather the price of the product, determined as we have seen through the law of demand and supply, that determines the price of the productive services, by virtue of the law of cost of production, the *prix de revient*" (*ibid.*, p. 176).

As for Jevons, it is further to be said that in numerous cases he impliedly or explicitly adopts the notion of a social utility; that he repeatedly makes the feeling-quantities of different men both comparable and commensurable; and that he repeatedly identifies marginal utility with marginal offer price; and that his general reasoning involves of necessity each and all of these assumptions. It is nevertheless true that, in more careful analyses and formulations, each of these positions is repudiated and the correct doctrine accorded adequate recognition. A few questions must suffice under these heads:

SOCIAL UTILITY, COGNATE TO THE SOCIETY-AS-AN-ORGANISM DOCTRINE

"In a time of scarcity the utility of barley as food might rise so high as to exceed altogether its utility, even as regards the smallest quantity, in producing alcoholic liquors. In a besieged town the employment of articles becomes revolutionized."—*Theory of Political Economy*, 3d ed., London, 1888, p. 61.

"We are now in position to appreciate perfectly the difference between the *total utility* of any commodity and *the degree of utility* of the commodity at any point" (*ibid.*, p. 49).

"The laws which we have to trace out are to be conceived as theoretically true of the individual; they can only be practically verified as regards the aggregate transactions, productions, and consumptions of a large body of people. But the laws of the aggregate depend of course upon the laws applying in individual cases" (*ibid.*, p. 48).

THE FEELINGS OF DIFFERENT MEN MADE COMMENSURATE AND HOMOGENEOUS

"In Paris [in the siege of '70] a vast stock of horses were eaten, not so much because they were useless in other ways, as because they were needed more strongly as food. A certain stock of horses had, indeed, to be retained as a necessary aid to locomotion, so that the equation in the degrees of utility never wholly failed" (*ibid.*, p. 61).

"Suppose that the rate of exchange is approximately that of ten

again seemed desirable not only to violate the time sequence in the development of doctrine, but to accord scant recogni-

pounds of corn for one pound of beef; then if, to the trading body which possesses corn, ten pounds of corn are less useful than one of beef, that body will desire to carry the exchange farther. Should the other body possessing beef find one pound less useful than ten pounds of corn, this body will also be desirous to continue the exchange. Exchange will thus go on until . . . . loss of utility would result if more were exchanged. . . . . The degrees of utility have come to their level, as it were" (*ibid.*, p. 96).

" . . . . In other words, if increments of commodity be exchanged at the established ratio, their utilities will be equal for both parties" (*ibid.*, p. 96).

But, "No attempt is made to compare the amount of feeling in one mind with that in another. I see no means by which such a comparison can be accomplished. The susceptibility of one mind may, for what we know, be a thousand times greater than that of another. But, provided the susceptibility was greater in like ratio in all directions, we should never be able to discover the difference. . . . . Between *A* and *B* there is a gulf fixed. Hence the weighing of motives must always be confined to the bosom of the individual" (*ibid.*, p. 14).

"The general forms of the laws of economics are the same in the case of individuals and of nations; and, in reality, it is a law operating in the case of multitudes of individuals which gives rise to the aggregate represented in the transactions of a nation. . . . . The use of an average, or, what is the same, an aggregate result, depends upon the high probability that accidental and disturbing causes will operate in the long run . . . . so as to neutralize each other" (*ibid.*, pp. 15, 16).

MARGINAL UTILITY IDENTICAL WITH MARKET PRICE

"We shall seldom need to consider the degree of utility except as regards the last increment. . . . . I shall therefore commonly use the expression *final degree of utility*, as meaning the degree of utility of the last addition, or the next possible addition of a very small, or infinitely small, quantity to the existing stock. . . . . We may know the degree of utility at any point while ignorant of the total utility" (*ibid.*, p. 51).

"The value of a divisible commodity is measured not, indeed, by its total utility, but by its final degree of utility" (*ibid.*, p. 137).

"Value depends solely upon the final degree of utility. How can we vary this degree of utility, etc.?" (*ibid.*, p. 164).

But on page 141: "The general result of exchange is thus to produce a certain equality of utility between different commodities, as regards the same individual; but between different individuals no such equality will tend to be produced. . . . . The degree of utility of wealth to a very rich man, etc."

Marshall's well-known note (*Principles*, Book V, chap. xiv) admirably discusses Jevons' remark (*Theory*, p. i): "Repeated reflection and inquiry have led me to the somewhat novel opinion that value depends entirely upon utility"—saying—"A trading body is not a person;

tion to personal questions of priority or of originality in the progress of this doctrinal evolution. That the works of Wieser and Boehm-Bawerk stand today as the most authoritative expression of what is characteristic and dominant in the unfolding of Austrian theory must serve as

it gives up things that represent equal purchasing power to all of its members, but very different utilities. It is true that Jevons was himself aware of all this. . . . . Jevons' antagonism to Ricardo and Mill would have been less if he had not himself fallen into the habit of speaking of relations which really exist between demand price and value as though they held between utility and value."

Jevons' account of the relation of cost to value needs some slight attention at this point. Does cost fix value or value cost?

"Wages are governed by the same formal laws as rents. . . . . So far as cost of production regulates the values of commodities, wages must enter into the calculation on exactly the same footing as rent."—*Op. cit.*, Preface, p. xvi.

"When labor is turned from one employment to another, the wages it would otherwise have yielded must be debited to the expenses of the new product. Thus the parallelism between the theories of rent and interest is seen to be perfect in theory. . . . . Precisely the same view may be applied, *mutatis mutandis*, to the rent yielded by fixed capital, and to the interest of free capital" (*ibid.*, p. xlix).

"Value depends solely on the final degree of utility. How can we vary this degree of utility? . . . . By having more or less of the commodity to consume. And how shall we get more or less of it? . . . . By spending more or less labor in obtaining a supply. . . . . I hold labor to be essentially variable, so that its value must be determined by the value of the produce, not the value of the produce by the value of the labor" (*ibid.*, pp. 164, 165).

Then, having treated the production margin as an equilibrium between the labor pain of production and the pleasures attaching to the possession or consumption of the product,—"labor will be carried on till the increment of utility . . . . just balances the increment of pain," he continues: "The preceding theories lead directly to the well-known law, as stated in the ordinary language of economists, that value is proportioned to the cost of production. . . . . As the increment of labor considered is always the final one . . . . articles will exchange in quantities inversely as the costs of production of the most costly portions, i. e., the last portions added" (*ibid.*, p. 186): Which sums up in accepting all of what is most pernicious in the labor-cost doctrine, viz., the abandonment of entrepreneur cost, the adoption of pain cost, and the jellification of labor. It may be here noted that Pantaleoni concurs in this labor-pain-cost view (Maffeo Pantaleoni, *Pure Economics*, Macmillan, 1898, p. 102), as, for that matter, in most other of Jevons' errors, e. g., in his constant and consistent hedonism, and in the repeated identification of marginal utility with marginal demand and with market value.

justification for the prominence—near to exclusiveness—given to these two writers in these pages.

Wieser had in 1884 published his *Ursprung und Hauptgesetze des wirtschaftlichen Wertes,* and had been by Heinrich Dietzel somewhat scathingly reviewed. In 1885 appeared Boehm-Bawerk's *Capital und Capitalzins,* and in 1886 the *Grundzuge der Theorie des wirtschaftlichen Guterwerts.* In 1890, and before the publication of the *Positive Theorie,* was published Dietzel's onslaught upon the newer doctrine, *Die klassische Werttheorie und die Theorie vom Grenznutzen.* During the same year came Dr. Robert Zuckerkandl's few pages of reply, and a short note from Boehm-Bawerk formulating certain questions which, with their answers by Dietzel, were intended to make precise the issues to be debated. Dietzel promptly replied to the questions as formulated, and in 1892 appeared the rejoinder of Boehm-Bawerk.[2]

The entire controversy, and especially that portion of it belonging to Dietzel and Boehm-Bawerk, is to our purpose as serving in peculiarly marked degree toward bringing into intelligible statement the issues between the two points of view.

Dietzel's review of Wieser need not detain us here. The later and more formal article, Dietzel's attack upon

[2] 1884, Wieser, *Ursprung und Hauptgesetze des wirtschaftlichen Wertes.*

1885, Dietzel, review of Wieser's *Ursprung und Hauptgesetze,* Conrads *Jahrbücher,* neue Folge, XI, 161.

1885, Boehm-Bawerk, *Capital und Capitalzins.*

1886, Boehm-Bawerk, *Grundzuge.*

1890, Dietzel, *Die klassische Werttheorie und die Theorie vom Grenznutzen,* Conrads *Jahrbücher,* N. F., XX, 563.

1890, Zuckerkandl, Reply, *Die klassische Werttheorie und die Theorie vom Grenznutzen, ibid.,* XXI, 509.

1890, Boehm-Bawerk, *Ein Zwischenwort zur Werttheorie, ibid.,* XXI, 519.

1891, Dietzel, *Zur klassischen Wert- und Preistheorie,* Conrads *Jahrbücher,* dritte Folge, I, 685.

1892, Boehm-Bawerk, *Wert, Kosten und Grenznutzen, ibid.,* III, 321.

the general position of the newer school, opens with the pardonable error of assuming that Boehm-Bawerk's doctrine of subjective value is offered as somehow a workable doctrine of market value. Dietzel, therefore, directs his attack against the Austrians' peculiar ground of Crusoe conditions and of purely personal analysis, and asks whether, upon these terms, value, as a relation between commodities, is a question of marginal utility rather than of marginal cost.

And Dietzel makes it fairly clear that, *in the Crusoe economy,* the only possible common denominator under which freely reproducible goods can obtain an objective and practicable basis of comparison must be the labor-cost denominator. True, utility, may, for goods limited in supply, stand as the best thing, because the only thing, possible; but when the good can be reproduced by labor, labor will come to stand as the cost; the loss of the good will appeal to Crusoe only as the loss of the labor of replacement, and the good, no matter how much greater its utility may be, will fall to the value rank set by its cost. And Dietzel points out that, especially with goods not existing in stocks, their utility affords no basis of comparison; all goes over to cost computations: "Assume that the cabin can be reproduced in 10 hours, the net in 10, the bow in 8, the food supply in 5; Crusoe, if he knows anything about how to figure in economic fashion, will fix the *Wert* of the goods at the figures 10, 10, 8, 5." Suppose Crusoe to need per day three liters of water and ten fish, and has in store three days' provision of each, nine liters of water, and thirty fish. Will he appraise the water and the fish, relatively, according to their respective marginal utilities? If with five hours of labor he can get nine liters of water or ten fish, he will be indifferent whether he lose his three days' supply of water or his one day's supply of fish.

But from all this—and there is more of it, and of a most convincing sort—it is evident that there is no issue.

In the *Grundzuge,* Boehm-Bawerk had admitted the principle of cost—of substitution—and had even gone so far as to say that the utility of the purchased good actually was the utility—the subjective worth—of its cost good; and where,—as is admitted is sometimes the case, though the rarity of it appears to be overstated,—the method of replacement is labor pain, labor pain was admitted to be the cost.

But note carefully that with Boehm-Bawerk this labor pain as cost leads only to the establishment of *subjective worth;* with Dietzel labor pain becomes a relational, common-denominator, medium fact. What, for example, does this 10, 10, 8, 5 series of figures mean to Dietzel? Simply relations of importance, reflecting the *relative* labor requirement; nothing is implied by Dietzel, and nothing is cared whether the services from possession or the pains from procurement be little or much; he is in pursuit of a common denominator and a basis and a cause for precise comparison. But with Boehm-Bawerk a subjective value of 10 means a certain quantum of feeling, so much pleasure, or defense from so much pain, a definite feeling-volume; and if the subjective value (worth) of this 10 of pleasure is, by virtue of its cost, only five, this 5 likewise is a non-relational fact, a definite quantum of pleasure lost or of pain accepted in order to obtain or to retain the 10 item of well-being magnitude.

And therefore the simple fact is that there is no issue. Dietzel is talking of the relations between Crusoe's utilities, his *inter*-valuations—to accept for the moment the Austrian view of the terms, while Boehm-Bawerk is within the field of absolute magnitude. Dietzel is in the field of exchange value; Boehm-Bawerk's discussion is subjective-worth discussion.

Dietzel's attack being mostly beside the point, as raising no issue, the reply contributed by Dr. Robert Zuckerkandl, at that time Privat-Dozent in the University of Vienna, could have no great significance in the discussion. The following passage, however, deserves record:

> It is an error to suppose that the later value school has seriously in mind the basing of market valuation upon the analysis of the economics of isolation. This method has been used only for readier illustration and in order to make certain phenomena in actual economic life more fully intelligible. Beyond this the

isolated economics is without interest. . . . . Actual economic life is something essentially different from an isolated system, and what serves in the one as a rule may very readily in the other be only an exception. And so, if the labor measure were taken to hold for the Crusoe case, little would follow from this for actual affairs.

Seemingly in entire ignorance of Zuckerkandl's contribution, Boehm-Bawerk now attempts to bring the controversy to precise issues, and thereupon transfers the whole discussion forthwith to the market-value field.

Does Dietzel regard the "sum of labor" in production as synonymous with cost of production, or does he mean by "cost" the sum of the various different costs of the entrepreneur, in which the labor itself figures not accurately as total but only as one value item? (That is, does Dietzel accept entrepreneur cost as the significant cost category?)

Answer: The latter, the entrepreneur view, is accepted.

Does Dietzel regard the value of the cost good as the cause of the value of the product, or is the product value the cause, and the cost-good value the effect?

Answer: Each is the cause of the other.

Is the issue merely that the later school arrive at market price out of the worth estimates of the marginal traders, and only round-about-wise out of cost, while the classical school go directly to the cost fixation?

The answer is not quite specific, but the issue is stated to be upon the interpretation and treatment of costs.

Does Dietzel regard labor as a valuable good falling under the cost-of-production law, and as fixed in value by the subsistence cost of self-maintenance and of rearing successors?

Answer: Yes, in the long adjustment.

Dietzel prefaces these answers with the complaint that while he had taken the Austrians upon their own peculiar ground, the psychological analysis of the individual economic life, the reply is merely to transfer the discussion to the field of competitive trading; in all of which complaint Dietzel is correct enough, but for the fact that the

isolated analysis is not conceived by the Austrians, *at their best*, as basis for the solution of the market-value problem, but merely as preparation for the problem.

In fact, labor cost, as the solution of the supply side of the value equation, can hardly be attacked in the Crusoe system of things, or in any system where all men are conceived to be precisely alike. Not so, however, for actual market conditions; all the products of one producer may, both in cost and in marginal utility, be the equivalent, in subjective worth, of the day's-end item of labor applied, and may exchange against similarly produced and measured goods of another producer. The goods purchased by either man will then be obtained through this marginal, day's-end, labor burden; that is, labor cost will apply for each man to limit his volume of product and to express the importance of the purchases made through his product; but the goods produced find, for their utility or subjective worth, no measure or expression in the ratios at which one man's products exchange against the other man's products; the quantities of time respectively devoted by the two men, the burdens undergone, the pleasures obtained, will have in the market-value expression no relation to each other.

Dietzel accepts the entrepreneur notion of cost, that is, he makes cost items enter into the computation only as reduced to terms of value. Thus far, then, there is for present purposes still no issue; though, as we shall later see, the Austrians do not themselves hold consistently to the entrepreneur analysis.

But upon the question whether market value is the cause or is the effect of cost, the discussion moves toward more definite positions of disagreement. Dietzel does not deny that cost goods derive, in a sense, their values from the values of their products:

> I declare plainly that . . . . both time and labor powers derive their character as goods from their usefulness, only not an actual but a potential usefulness, in the sense that they are the conditions of all satisfaction of wants and of all creation of utility; further, that they derive their character of economic goods [that is, valuable goods] from the fact that they are limited in supply.

Note now that Dietzel is attempting to make labor a valuable good in precise parallel with machinery or land, and this not in the sense merely that effort must be compensated in order to obtain product, and compensated approximately in the measure that it is attended by value product, but in the sense also that labor has an objective existence, as a thing separate from the putting-forth of it, seemingly as a *not-man* fact, like land or appliances.

But Boehm-Bawerk had put his question in the alternative, implying that the production good must be the cause, with the value of the product the result, or vice versa. This Dietzel denies: "The value of the production good and the value of the consumption good condition each other mutually," since no production good has value if its product is valueless, and no product has value if its production good is valueless.

> A mine derives its character as a good from the fact that it can produce useful products; it becomes a *valuable* good from the fact of its scarcity. [Or is it from the scarcity of its products?] The product of the mine derives its value from the value of the mine, the mine its value from the value of the product. The Johannisberger vineyard is a good because of its potential [?] importance as the condition of the satisfaction of the desire for a particular wine; the vineyard is a *valuable* production good because it is a unique, or an absolutely scarce, production good. The wine gets its value from the value of the vineyard. If the vineyard loses its value, as, for example, by new methods of viticulture, the wine would, so far as its value were a land-cost value, become valueless. The vineyard, in turn, gets its value from the value of the wine.

Dietzel's objection to the alternative form of the question would, however, better have run not so much that either answer is correct as that neither is correct. For certain purposes and for its particular point of view either way of answering must indeed be admitted to be correct; but the difficulty is that the alternative question assumes that upon the one side or the other the ultimate causes are to be found. It is surely true that an existing market value is the cause of the entrepreneur consenting to make his cost outlays; and it is equally true that forthwith the entrepreneur product affects, modifies, and readjusts the market

value of the product; and it is also true that meanwhile entrepreneur competition is placing new values on the cost goods and bringing about a new proportion-adjustment of values with costs, or of costs with values; and, in turn, upon these new costs are based new entrepreneur opportunities, computations, and producings, and so on indefinitely in a circle, the result of each situation becoming in its turn a cause for the next term in the series. The ultimate causation must, then, be sought elsewhere; in the sense of finality neither cost nor value is cause, and any attempt to fix upon either as ultimate, or even as logically prior to the other, must inevitably lead to circuity of reasoning or to question-begging.

As between cost and demand, Dietzel admits and agrees that the earlier fact in the sequence is the demand with its possible price; mines could not be scarce if people did not want iron; but then comes in cost to put the later, but the decisive, touches to the situation. True it is that what the buyers will, at the outside, pay limits what the producers may spend in costs; in this sense the demand determines the cost; but the last determination and the exact one is the cost. The demand gives the maximum possible price; the cost gives the actual price.

On the question whether labor as a productive fact derives its value from cost of production, Dietzel says that, as a short-time doctrine, the value of the labor is explained by the fact that satisfactions depend upon it. But in the long run wages cannot be lower than the expenses of living and of rearing a family; and if higher than this, the increase in numbers will finally prescribe the subsistence level of wage. Precisely how this works itself out he leaves to be taken for granted.

Boehm-Bawerk in rejoinder, two years later, says, with all emphasis, that the issue is not at all upon the validity of the law of costs:

> The actual and essential features of the cost law, viz., that cost regulates the value of reproducible goods, that we commonly appraise the goods directly according to costs, that changes on the

side of cost cause changes in the level of value, these things the marginal utility theorists have never in the slightest overlooked or denied.

The issue, he says, is merely as to whether this cost law is final or whether, on the other hand, it rather does not itself need explanation. And to add the necessary explanation involves an extension of theory, yet not an extension of a sort to cut across the cost law, or to mutilate it, but one which shall support and strengthen it.

This then is the issue for which we have been waiting. Excepting in the entirely unworkable sense of labor pain, the classical school did not, and, as has already sufficiently appeared, do not explain costs. And it is also sufficiently evident that costs require explanation. It is at all events to be set down to the credit of the later school that this problem is fully faced by them, and a serious and systematic attempt made toward its solution. That there are serious and obvious doctrinal gaps in the Austrian analysis of demand, that the terminology, while more than prodigal, is yet both illogical and insufficient, are defects not intrinsically overserious of remedy. And in these particular aspects, the newer position, with the necessary modifications, would not be fundamentally at variance with the Ricardian doctrine and point of view. The ultimate test must come with the newer treatment of costs. In the conviction of the present writer, the Austrian doctrine, as tried by this test, makes not better than a passable showing.

Boehm-Bawerk continues: Doubtless value as cost may be used to explain value as product; but how explain the first value? If value is traced back far enough, it is almost certain to come upon some non-reproducible good, for the value of which cost will not serve as explanation, or at all events to come upon labor. How value this non-reproducible good or this labor? Shall we, with Dietzel, value the labor by its production costs, by the bread and meat necessary to maintain the laborer and his family? But these have themselves already been value-explained in terms of labor.

The later school resorts for the solution of this difficulty to the doctrine of production-related cost goods, the doctrine, namely, that the value of a production good in

any particular employment is derived from its value in other employments, so that the values of similar goods are equal as determined by their values in their marginal use—a solution of the cost problem in terms ultimately of utility rather than of pain:

> And as the value [subjective worth] of each similar sack of corn is determined according to the utility of the sack dispensed with at least sacrifice, so the value [*Wert*—subjective? objective?] of all production goods is determined generally according to the value of the most easily sacrificed good which will be produced out of the common production store, or, as we call it, according to the marginal utility of the marginal product.

And here, it is to be remarked, are summed up all the faults and errors in the Austrian solution; for it must be that we are talking of market value, since it is Boehm-Bawerk himself who has elected to transfer the discussion out of the subjective field: (1) With cost as a competitive problem—an entrepreneur reckoning—the value of the production good in one use is not necessarily dependent upon its having an alternative industrial employment. As long as there is an alternative bidder for it, competition by other entrepreneurs, it does not at all matter whether the good has several valuable applications or only one.

Boehm-Bawerk's reasoning mixes collective with competitive cost computations, a radical and all-pervasive error. But how as a Crusoe or a collectivist problem? Even so, the utility, the importance, the subjective value of an agent does not depend on its having another use; only the *cost* aspect of the agent, as a constituent of the production cost of the product, so depends; it is, in such case, the worth of the one and sole product that gives worth to the agent; *agent-wise,* there is no question of cost.

(2) It is most difficult to make out what *Wert* stands for in Boehm-Bawerk's formulation. In the first use, it is almost of necessity the subjective-value concept that is intended. The second use cannot bear the subjective-value meaning, else, as non-relative, it would be meaningless, or would be worse, as introducing all of the rich-man-poor-man perplexities. It has more the sound of some social marginal utility, society being conceived of as, for the purpose, an individual. But this concept any Austrian

would be quick to outlaw as nonsense. Nor logically and justifiably can the concept be one of marginal market value, or any other market-value concept, since it is market value that is sought to be explained. But whether logical or not, this last is probably the correct interpretation; it seems, indeed, to be the only possible interpretation. And so, assuming that there is an alternative and marginal use, and that this use has a value of its own, independently of the other and non-marginal uses, the Austrian method will trace the value of the other productive items back to the value of this marginal use. But it will still remain to explain the value of this marginal use, and to establish for value purposes its independence of the non-marginal items or non-marginal uses. Must not this marginal-value use be also explained by appeal to some displacement, some cost?

But whether this newer view is or is not tenable, Dietzel, as Boehm-Bawerk rightly points out, has himself adopted it. Dietzel recognizes that the value of the cost good must be explained; and when he says, "The cabin that saves me ten hours' labor is of equal worth to me with the products which I need and which with this sum of labor I purchase from nature, he may be able to see how his explanation differs essentially from that of the marginal utility theorists; I [Boehm-Bawerk] cannot."

Boehm-Bawerk insists that Dietzel's explanation, if a full one, must go farther and explain the value of the displaced fact, the cost; this cost value must find its explanation in marginal utility:

> The less material and labor it requires to make a coat, so many the more coats from the same goods; so much the lower down the utility curve can satisfaction extend, so much the lower the marginal utility of coats. By service to marginal utility [*Grenznutzen*] the cost goods come to be valued. Not cost, but utility, then, is at the end of the causal series.

Here again is some of the talk that has given rise to the identification, through cost, of marginal utility with value. Surely marginal purchase price, whether of a consumption good or of a cost good, is capable—all differentials aside—of standing as the equivalent of price; but it is equally

clear that the volume of supply items has something to say as to how far down upon the curve of demand the marginal item will be found. And only one page back marginal utility was itself stated as a result of the relation between need and provision for need.

And, as Boehm-Bawerk goes on to say, not the technological fact—the good or the labor applied—is final as cost, but the value of it; the technological aspect is merely a secondary influence in the case, as bearing upon the quantum of the supply.

Now this is clearly entrepreneur analysis, and as such is correct in giving precedence to the value aspects of the production goods; though it remains true that it is only as based upon the technological efficiency of the production goods, as underlying the production of things of value, that these production goods have any value. But once again let it be said that entrepreneur costs are themselves not final facts in value causation, but only the method of expression by which, in an entrepreneur economy, the final facts attain manifestation. The quantity of production goods, as mere mechanical facts—technological capital—has bearing upon the quantity of the product. But quantity of product does not directly determine value; only through supply in its relation to demand does the quantum of product reach a value standing; thereby the production goods obtain, through entrepreneur bidding, their value. If there is any one thing fundamental in all this, it is not the value costs, but the volume of production goods. And still the volume of production goods must in turn receive an explanation, not only as an aggregate, but also as a share directed to the service of any particular line of supply. The first question, that of the aggregate supply of production goods, goes back to the original environmental situation, or to an account of the genesis of instrumental goods through the intermediary of savings and capitalization. The second problem, that of the distribution of the instrumental goods between different lines of production, leads over into the demand side of the value equation; given at any time the aggregate supply of different commodities, how are these adjusted to one another in exchange relations—market values? and how, in view of their existing volumes, do production goods, through entre-

preneur bidding, receive their market values, get distributed among the different industries, modify the value levels for products, and thereupon get revalued and redistributed?

But, while Boehm-Bawerk regards the old school and the new as at issue upon the nature of costs, he finds Dietzel to be after all in essential agreement with the later doctrine; as against Dietzel the issue is solely as to which of the two influences, cost and marginal utility, is cause and which effect. Dietzel's position is that both are cause and both effect, in some final and ultimate sense. Upon this issue Boehm-Bawerk's argument is clear and convincing to the point of brilliancy: Material causation is easily misunderstood and misapplied; a tree may be the cause of an acorn, and the acorn in turn the cause of a tree, but not of the same tree; poverty may cause drunkenness, and this in turn cause poverty, but not the same poverty. Concretely the same things, the same objective facts, cannot be both cause and effect. Dietzel's position is a logical impossibility.

Note here, however, that the question is so far only whether utility—or marginal utility, or subjective worth—is or is not the cause of cost; and surely on this point there can be no doubt as to which category in economic production is primary—demand or supply. But upon the further question whether, *as an entrepreneur* fact, cost causes value, or value cost, it is not so clear which is right, or that either is right; neither costs of production nor values of products are to be accepted as ultimate causes; rather both are to be regarded as effects of desires for products, as over against human productive powers in conjunction with the environmental equipment of productive opportunity and productive instruments. The causal sequence runs, human desires and needs being taken for granted, from production goods and human productive powers, more or less scarce or abundant relatively to the needs, to the more or less of products relatively to the needs, thence to the relative exchange powers of products, thence to the relative exchange powers of the productive agents and instruments. On the supply side, the primary term of the causal series is

the instrumental goods and powers—but not these goods and powers in their *value* aspect.

But evidently all of this reasoning is upon a level of value analysis deeper than the entrepreneur categories and underlying these categories,—a stratum of thought to which the cost category is irrelevant, otherwise than as mere expression or manifestation of the underlying facts which, under the competitive management and bidding of entrepreneurs, are making themselves effective through the leveling and proportioning mechanism of entrepreneur costs. The entrepreneur, however, is prone to accept the values of the cost facts as opaque and ultimate causal data determining the values of products by determining the supplies of them.

But Boehm-Bawerk is right in insisting that the *value* aspect attaches to the production goods only by way of derivation from the value of the product. But it is equally true that the limitation of supply, whereby value arises, is upon the products only as a derivative from the limited supply of agents. And, in fact, Boehm-Bawerk says as much; his argument for his aspect of the truth runs as follows: Priority of time is not the point; there is no summer till after the spring, but the spring does not cause the summer. The value of the product is explained by the fact that the production goods are not in superfluity; put with this the demand, and value comes both for products and for cost goods,—that is, the product has value by virtue ultimately of the same cause that gives value to the productive good. None the less the value of the product is farthest back in the chain of causation; the production good gets its value from the value of the product. So corn is not high because rent is paid, but rent is paid because corn is high. If the art of smelting ore were lost, iron ore would become valueless, but not iron; while to forget the methods of using iron would render both iron and iron ore valueless. So a corner in brick will carry up the prices of brick, together with the quotations upon stocks in brick corporations; but prices of brick cannot be raised through

an advance in the market quotations upon brick stocks, etc.—all excellent, if only it all mattered, if, in truth, the causation were *finally* with the value of the produced good. But it is, at any rate, clear that it is not finally with the *costs* of the produced good.

CHAPTER XIX

THE *POSITIVE THEORY* AND *NATURAL VALUE*

It is not surprising that in the *Positive Theory* a goodly part of Boehm-Bawerk's discussion of market-value costs is found within the chapters upon "Subjective Value." [1] That between subjective cost, market-value cost, collectivist cost, and entrepreneur cost, there is a shifting so continuous that one is rarely sure of precisely what is being discussed, must fairly be accorded this much of justification, that Boehm-Bawerk himself does not recognize the importance of the distinctions. But the distinctions are none the less important, and it is for the most part in the failure duly to recognize them that the Austrian view of cost falls so far short of consistency and adequacy.

The later theory, Boehm-Bawerk says, explains value by "the marginal utility which a good is capable of rendering; that is to say, it depends on its *future employment*," [2] and not on the value of the production goods consumed in producing it, not on the conditions of its origin; the determination is forward-looking.

Lest this be understood as denying the influence of costs, let it be kept in mind that the discussion here is of subjective worth, and that marginal utility for this purpose has itself already been made a matter of costs, but all the while forward-looking,—a question, that is, of what sacrifice of other values, or sometimes, doubtless, of effort, will result.

And it may again profitably be said that any form of value must run in terms of some condition or sacrifice imposed upon the having or the keeping. The criticism urged is merely that the cost of the marginal utility, the value of it, should, as a concept, be kept rigorously distinct from the marginal utility itself. And, after all is said, it remains true also that the very concept of marginal utility itself is a cost concept. That the esteem, the significance,

[1] *Positive Theory,* Book III.

[2] *Positive Theory,* p. 179.

the emphasis, but not the utility, accorded to each item in the whole stock is reduced to the level of the marginal item, is, in last analysis, as much a doctrine of cost, of substitution, as the method by which the subjective worth of the marginal utility is found to be determined by that last and least-cherished item of some other series. But the last item in any one stock cannot, as the cost of any other item, be offered as basis or measure of value, because, as merely exchanging against duplicates of itself, no light is thrown upon the question of its exchange power.

But Boehm-Bawerk [3] shows that the value [subjective?] of a production good—by the very fact that it is not a consumption good and can therefore have, in its own right and ultimately, no utility—is not derived from its own marginal utility, but only from the marginal utility of the product. "The value must be high when the dependent satisfaction is important, and low when it is unimportant." [4]

This seems to be a subjective value formulation, and, as such, needs, perhaps, no criticism for lack of relativity; but surely as a market-value formulation the doctrine would require restatement to read: "The value will be high when the dependent satisfaction is *relatively* important, etc."

But here the difficulty again presents itself that, in close analysis, the subjective worth of a production good, like that of a consumption good, is determined not by the dependent utility itself but rather by the cost aspect of the dependent utility; which cost may as well be found in the mere labor cost of the production good as in the displacement of some potential product: for, according to the Austrian view, the utility of the marginal good may not, after all, be determined by its own utility but by its displacement of other utilities, or possibly by its own labor cost. The cost principle, as here invoked to arrive at the subjective value of the consumption good, implies that the subjective value of any production good must be found, not in the marginal utility of its product, but in the subjective value of its marginal product; not, that is to say, in its marginal-utility productiveness, but in the marginal cost of this productiveness.

[3] *Positive Theory.* [4] *Ibid.*, p. 180.

But, in point of fact, it is not possible even here to be sure that the discussion is in the subjective-value field; for, in confirmation of the argument, appeal is made to market-value phenomena, and to that very "law of costs. . . . . Experience shows that the value of most goods is equal to their 'costs.' But costs are nothing else than the complex of those productive goods which have value . . . . [and] must be expended in the making of the products." [5]

Suppose that one has three similar production goods, any one of which will suffice for the production of consumption good *A, B,* or *C,* the *A* product having a marginal significance of 100, B of 120, C of 200; the production good must have a value of 100: "The value of the productive unit adjusts itself to the marginal utility and value of that product which possesses the least marginal utility among all the products for whose production the unit might, economically, have been employed." [6]

"The *Wert* of goods which have a higher individual marginal utility is put on a level with the value of the 'marginal product'—as we shall call that product which has the least marginal utility." [7]

Here we note that marginal utility and *Wert* are presented as not necessarily equal; the *Wert* of the non-marginal product is made equal to the *Wert* of the marginal product, since the production goods—deriving their value from the marginal application—dictate as costs their lower value to products possessing higher marginal utility but requiring only equal costs.

We seem here to be in the field of subjective worth—though all the while this is not to be certainly asserted. But, at any rate, why is the 100 use marginal? that is, why are there only three production goods? Probably because other productive openings have left no larger provision of agents for the three wants in question. Even on the individual basis, then, there is something relational here, and something backward-looking.

Boehm-Bawerk's doctrine that value is the sum of mar-

[5] Boehm-Bawerk, *op. cit.,* p. 183.

[6] *Ibid.,* p. 186. [7] *Ibid.,* p. 181.

ginal costs, each of these costs getting its value from its least valuable use, would be true, so far as it goes, if only these marginal costs were fully analyzed into an indifference between marginal uses. But here a distinction must be drawn between isolated or collectivist production as against competitive production. The displacement, as opportunity idea, applies to competitive production only through the individual computation. The entrepreneur is as readily marginal through his outlay for the cranberry patch as for some productive good having an alternative application. To the entrepreneur there is the clearly defined alternative by virtue of which he becomes marginal, viz., whether or not to apply his capital power to the hire of the cranberry patch. And in point of fact also, the cranberry patch has alternative applications, in the sense that it has different and competing relations of adaptation and of desirability to different men; the successful bidder has not necessarily to bid his maximum, but only to outbid his most willing competitor. It is thereby rare that, in market-value problems, the producer nearest to the margin is really upon the margin,—rare, that is, that cost ever quite equals value. That the case is not precisely the same with Crusoe, or in collectivist production, is due to the fact that in the isolated economy, cost resolves itself mostly or entirely into the alternative-want aspects of production, into the resistance pull of other demands. That Boehm-Bawerk, despite the fact that he is citing and discussing a market-value doctrine, is proceeding upon the group concept of cost, instead of upon the competitive concept, is shown in the following:

> If we are considering what a good . . . . of higher immediate marginal utility is worth for us, we must say first of all, it is worth exactly as much as the means of production from which we could reproduce it at any moment. Then if we examine further how much the means of production themselves are worth, we come to the utility of the marginal product.[8]

It is, indeed, passing odd that the principle of displacement is applied here but is not accurately applied to competitive costs; but in competitive cost the principle is more difficult to apply, as complicated with questions of individual capacity and preference. In competitive production the costs are fixed, in part by the market prices of production

[8] Boehm-Bawerk, *op. cit.*, p. 188.

goods, and in part also by the alternative openings offered for the personal activity of the entrepreneur; he is not, in any ordinary case, appreciably an influence to affect the conditions. Yet in his small share, whether he be a marginal producer or not, he does have an effect. Labor, or land, or capital uses, acquire their market value as productive agents through the competitions of producers bidding for the help of these agents. The value is not the marginal-value contribution of the agent, but is the price adjustment at the level of the marginal bid,—not the possible but the actual bid in view of the actual value contribution, or,—put more accurately so as to cover the interest-discount modification,—it is the price set at the marginal bid in view of the present worth of the expected future value contribution. But the competition of producers is ordinarily not drawn from one field of production alone; the quantity of agents at the service of one line of production is commonly, though not always, mostly a question of the alternative pull of entrepreneurs in other industries.

Cost, from the individual point of view, is therefore truly a question of displacement, but sometimes of displacement of agents from one productive use to another, sometimes of agents from other competing hands to the producer's hands. The higher of the two amounts functions as the cost quantum. So, for example, if land costing the tenant 100 rent may be made to render him 103 of service in corn or 105 in wheat, the land cost of the wheat is not 100 but 103. That is to say: The cost of the agent under consideration will be expressed either as the money significance of the agent in some alternative employment under the management of the holder, or as the money outlay imposed by the bidding of competing entrepreneurs; and the true cost will be the larger of these two value quantities. Thus, while we may acquiesce in Boehm-Bawerk's statement, "that even when the law of costs holds, costs are not the final but only the intermediate cause of value," this acquiescence must import a meaning different from that intended by Boehm-Bawerk; it cannot be admitted that demand has anything more to do with value than has cost, unless in the ultimate sense that all economic activity traces back to want, and that even competitive costs are more commonly than otherwise the expression of alternative demands. And we must dissent unqualifiedly from the

general proposition that "it is only this many-sided character of most cost goods, their capacity for being employed in many different uses, that gives the appearance of the contrary." [9] This statement is uniformly true only of the isolated or socialized economy. But doubtless it is sometimes true of competitive production; that is, it may, as we have already seen, be the case that in any particular entrepreneur's hands an agent be on the point of being turned by him into another line of production; against the use that he is making of an agent, the highest bid is not that of some competitor but is his own bid for use in another line of product.

In Wieser's treatment of costs and of value, the discussion chiefly concerns that which he terms "Natural Value,"—collectivist value—value arising "from the social relation between amount of goods and utility, or value as it would exist in the communist state." [10]

That this manner of approach is for many purposes most serviceable is not to be denied; but to be a working concept, it must assume that in administration all individuals are regarded not merely as entitled to equal consideration, but as precisely similar in all relevant aspects; or, if the discussion is to throw light upon exchange-value problems, that an equal quantum of purchasing power is assigned to the different claimants under the collectivist distribution.

Wieser points out that, under present conditions, goods are not distributed according to their maximum service in consumption, but according to strength of purchasing power; exchange value estimates luxuries high and necessaries low; error, fraud, force, private property, and social inequality disturb the case: "In natural value goods are estimated simply according to their marginal utility; in exchange value, according to a combination of marginal utility and purchasing power." [11]

[9] Boehm-Bawerk, *op. cit.*, p. 189.

[10] Wieser, *Natural Value*, p. 60.

[11] *Ibid.*, p. 61.

In a certain sense, truly, all prices are costs, as terms of sacrifice upon which all goods are obtained. But an entirely intelligible and analyzable value situation might obtain under conditions in which cost of production could have no part, as, for example, under the government supply-distribution system at an Indian agency. So Wieser rightly remarks that the elementary theory of value considers "that goods come into men's disposal without requiring to be first produced," [12] but, as one infers, with equality of purchasing power somehow established in the society, or with some assumed preliminary and temporary distribution of the consumption goods. In such conditions, land and capital could have no value. But "if we do away with this assumption [of non-production], we obtain the natural laws of value in production." [13]

So, under socialism, Wieser says:

> There must be land rent [land differentials]. . . . . In such a state it would not form personal property, but it would be calculated separately in the total income of the community, and that on essential grounds, namely, in order to find out what is the quota which individual lands contribute to total return, and to judge therefrom what outlay may and ought to be expended to obtain this quota. In other words, the economic-technical service, that of controlling production, would remain, while the personal part it plays, as a source of private income, would fall away.[14]

Now, not at all denying the service, both expositional and doctrinal, of this point of view, it is perhaps the more to be regretted that so often there slip in competitive concepts and illustrations, rarely clearly distinguished, and that the point of view appears to be in perpetual flux between collectivism and competition. In truth, here, as with Boehm-Bawerk, the reader finds that the difficulties of distinguishing between subjective- and objective-value doctrines are extreme.

Seemingly upon considerations both of expositional advantage and of logical priority, Wieser takes up the problem of distribution as fundamental to the doctrine of costs,—which, perhaps, is as well as the other way about, since either method must tacitly involve one or the other of two assumptions; either that value and distribution are dis-

[12] *Ibid.*, p. 61. [13] *Ibid.*, p. 61. [14] *Ibid.*, p. 63.

tinct problems, or that one solution may be made derivative from the other. "The consideration that, from production goods, one can obtain a return in goods which possess not only utility but value, gives production goods their value." [15] "But," as Wieser rightly says, "the proposition that production goods obtain their value from the value of their returns, suffices for the co-operation of the co-operating productive factors as a whole, not for their valuation individually." Thus value must explain costs as an aggregate, but until we find the principle of imputation, "the valuation of production goods [separately] will remain an enigma." [16]

Nor is it possible, as Menger thought, to arrive at the contribution of any one item by assuming its loss. Three goods, *A*, *B*, and *C*, co-operating together may give a value of 10, while any two of them together or applied in other combinations would give a value of only 6. By Menger's reasoning this would assign to each a value of 4. But 3 times 4 is more than the value of all working together. The advantage which a good renders is, therefore, not to be calculated by the loss which will come with its loss, but by the gain which does come with its possession.[17] The actual employment is the one from which computation should be made, and not the employment which might have been resorted to, if something not as good as was done had had to be done. The three factors in combination produce a surplus of 1 over what they could produce separately or in any other combination; it was because of this surplus that they were put together; to the extent of this surplus there is something to be divided which the method of subtraction cannot distribute.

But will this specific productivity solution serve better? The truth is that men bid for instruments of production to go with their own labor or to supplement an existing stock, because, with the new factors, the old become more pro-

[15] Wieser, *op. cit.*, p. 70. [16] *Ibid.*, pp. 72, 78. [17] *Ibid.*, p. 85.

ductive; but there is no occasion for ascribing the total of this joint and co-operative increase either to the old or to the new factors. Market values for productive contributions can, indeed, be worked out of situations of this sort—the market is doing it daily and hourly—but never any measure or purported expression of the value productiveness.

To a hunter, rifle and cartridge together may have a great *Wert;* as a necessary fact in the combination, either may be said to have all the worth; alone neither would have any of it. And likewise, if there is only one artist who can do a given thing, and only one item of material on which or with which the thing can be done, there is no theoretical way of dividing the finished product. But if either factor can be replaced, the deadlock is broken; and if there are different combinations enough into which the different production goods are entering, the market will solve, from all the different equations, the values of the different unknown quantities: so, from

$$x+y=100$$
$$2x+3y=290$$
$$4y+5z=590$$

it may be deduced that $x=40$, $y=60$, and $z=70$. "The sum of all the productive contributions exactly exhausts the value of the total return." [18]

But—it is to be objected—the entrepreneur must all the while be here as a fourth fact, and the adjustment of market value must take place through entrepreneur bidding. There are, then, accurately no such equations as $x+y=100$, etc.; the sum must be a different one with each different entrepreneur, since each of all the different goods must hold a different productive relation to each different entrepreneur. The outcome will be one ascribing to the instrument or agent as remuneration the sum expressing merely the highest entrepreneur bid for it by virtue of its productivity relation to this particular entrepreneur,—that is to say, the highest value offer.

[18] *Ibid.*, p. 88.

But it is at any rate true, as Wieser rightly insists, that the value of each productive good is in part conditioned on the existence of goods capable of co-operating with it,—on complementary goods. Land has greater value as capital goods increase; labor greater value as the land is better.

> According to Menger . . . . the farmer who loses his cart horse, loses only the value of the animal, whereas . . . . he suffers, beyond this, some disturbance in the value of his remaining productive wealth.[19]
>
> Every productive good . . . . has ascribed to it a *greater* effect than it could obtain through its own powers; . . . . on the other hand, ... a lesser effect . . . . than might be expected from the degree of dependence in which the complementary goods stand to it. . . . . The imputation assigns in this way a medium share. . . . . Of land, capital, and labor there is nothing to be said except that, together, they bring forth everything; alone, nothing.[20]

But note here that just how or why the outcome is as it is, cannot be made clear without the assumption of the entrepreneur fact, with all the differences in entrepreneur capacity, in capital equipment, and in personal preference. Wanting this aspect, and full allowance for it, we have only a mystery.

Noting also that the foregoing passage seems to appeal to the actual market, and that a part of it so appeals in terms, so that we are left in our chronic doubt as to whether and how far we are in the "natural-value" reckoning, the further development of the argument becomes of interest. The marginal law for production goods is asserted to follow that for consumption goods;

> In every stock of consumption goods, every unit receives its value from the marginal utility; thus the value which the products are expected to have is already adjusted to the marginal level, and the value of the production goods, as derived from this, is consequently placed, from the beginning, on the basis of the marginal value.[21]

But production goods may be used to create products

[19] Wieser, *op. cit.*, p. 91. [20] *Ibid.*, pp. 92–94. [21] *Ibid.*, p. 97.

of different kinds. "In each kind, taken by itself, the value of the product is adjusted to the level of its particular marginal utility." [22] And since these margins of utility in the different kinds of goods are rarely, if ever, precisely equal, "production stocks must always be employed in such a way as to bring forward those products which will secure the greatest possible satisfaction of want." And goods not all having the same marginal utility,—gold for the filling of teeth and gold for gilding not fully corresponding in utility,—"it is quite impossible in the two kinds of employment to keep always exactly to the same marginal amount;" it is sufficient if no rearrangement will bring a higher utility.[23]

Here again, not attempting to be quite certain whether the discussion is wholly collectivist in reference, though most of it surely is, and merely remarking these further cases of mix-up between marginal utility and value, or *Wert,* we are especially interested to observe that the difference in the utility of gold for teeth as against any other employment does not appear, in Wieser's thought, to depend upon differences in buyers' purchasing power, but solely upon the fact that the marginal need with reference to teeth may be much greater than any other need, even the highest, for gold for other purposes; but the value will correspond to the cost—to the displacement—in these minor uses. This, then, definitely asserts that value is often less than marginal utility, and so is one more recognition that marginal utility and value are distinct concepts, and are quantities not interchangeable, and that value is the cost aspect of utility.

But now recurring to the doctrine that "land, capital, and labor together bring forth everything, alone nothing," and that "the sum of the productive contributions exhausts the whole return," these statements, if accepted as true, must, as we have seen, be interpreted to include the entrepreneur as laborer, as co-operating factor of production, and also as the director in the distribution of product. Of land, capital, and labor, as compensated under rent, inter-

[22] *Ibid.,* p. 97.

[23] *Ibid.,* p. 98, *passim.*

est, and wages, and with no account made of profits, the proposition does not hold. And when we are asked to "suppose these productive elements employed on the most rational plan possible," we seem to be assuming that all the employed agents are precisely alike relatively to entrepreneurs in general, or that all are upon the market-value basis fully interchangeable, and that all entrepreneurs are precisely alike in all relevant aspects,—no part of which is in any wise permissible of assumption. For competitive production at least, these three productive agents must be taken as somehow including the employer, the valuer and bidder fact, or must assume as somehow in the background a fourth productive element, the human director; and he is always a different man. There is, then, no such thing as one most rational plan or combination of productive factors, unless this presupposes a one best entrepreneur. And in fact, under equally skilful but different entrepreneurs, different combinations of productive factors must be the best combinations. There is, therefore, for any particular production good, no such thing possible as one specific marginal use or marginal service or marginal utility or marginal productivity, as attributable to it in its own right and independently, or even as dependent solely on the relation of the agent in question to some other production good or goods, but only as also related to the situation and aptitudes and needs of a specific entrepreneur. There must, then, be as many specific marginal productivenesses as there are different entrepreneurs to come into relation with the good in question. The fallacy of the "marginal contribution" of any particular productive good is parallel to that of the marginal utility of consumption goods upon the market; in neither case is there room for more than a marginal relativity. For market-value purposes, the marginal productive contribution does not exist, but only the market value of the contribution, as the outcome of competitive bidding, based upon the significance, for individual purposes, of the good in question,—whether *sui generis* or as one good out of a stock of similar goods,—as forming a part of a particular entrepreneur complex. The purchaser of the production good may or may not be near to paying for it all he can; and while with one item out of a stock the quasi-rent fact is probably a smaller quantity than in case of an isolated good, there is no reason to suppose that it is entirely non-

existent. As applied to the inner relations of the entrepreneur complex, the doctrine here insisted upon with so much emphasis is, indeed, merely an application of Wieser's general doctrine: "We only estimate it [the farm horse] at a portion of the decrease that would ensue were the owner obliged to farm without it." [24] To value the horse according to all of the loss is to value it at more than one would need pay, and is at the same time to make it impossible to pay for the other goods upon a similar basis, or even to pay for them what under competitive conditions would need be paid for them.

Wieser fails, however, to see that, in point of fact, the accurate attribution or imputation of productiveness is impossible upon the market, simply because it is impossible inside the entrepreneur complex. The entrepreneur himself cannot tell how much the good in question produces for him, but only how much he can afford to pay for it to go with his other goods and his own productive powers, rather than to go without it.

In joint production the specific productivities of the different productive agents are clearly not obtainable; and in truth also, the productivity of any agent working in isolation is not obtainable, simply because no good ever so works; the entrepreneur fact, the director, is always in the background, and the productivity is therefore a productivity relative to him; thus the productivity must be a different one with each different entrepreneur. But even if this be somehow not entirely past question, it surely is clear that the aggregate productiveness of agents employed in combination is greater than the sum of their powers in isolated production, that it is precisely for this reason that they are placed in combination, and that the increment of product from the very fact of combination is a joint product not accurately to be distributed in terms of specific and distinguishable productiveness. In some slight measure, at least, there must be in every case some question of joint surplus product like that of the rifle-and-cartridge case, or like the case of the unique painter and unique material. The only practicable analysis is that of the entrepreneur who attributes to himself as profit all that he does not have to pay for the co-operating goods; but it is obvious that this analysis sacrifices accuracy to practicability.

[24] Wieser, *op. cit.*, p. 91.

This appeal to the entrepreneur computation and the entrepreneur bid supplies the missing link in the argument of Wieser with reference to the different equations; somehow, he says, the market, out of all the different equations, arrives at a marginal-utility imputation for each productive good. If it really does so, and so far as it does so, it is done by the bidding of entrepreneurs:

> To each single item or quantity is imputed the smallest contribution which under the circumstances can be economically arrived at by the employment [employer] of the particular item or quantity,—the marginal contribution [the marginal employer's bid based on contribution] . . . . or, looking at it from a different point of view, the marginal product [product to the marginal employer, if only this were accurately ascertainable].
>
> Productive elements which admit of only one kind of employment do not share the multiplicity of conditions necessary for the emergence of what we recognize as costs.[25]

This will be recalled as substantially the view adopted by Boehm-Bawerk as the relation of monopoly goods to cost of production, monopoly goods being understood by Boehm-Bawerk to mean, in this connection, scarce goods, goods not reproducible at will, like land, exceptional ability, etc. But it must be noted that Wieser's doctrine does not exclude the goods from cost bearing on the ground of scarcity or of non-reproducibility, but only because of the want of alternative applications. And this is unquestionably good cost doctrine for collectivist or for Crusoe economics. And if it were possible to make certain that Wieser is all the while in the collectivist analysis, there could be no room for serious criticism, except to point out that the application to competitive economics, if not made, calls imperatively to be made, and to point out also that, if made upon the basis left possible by Wieser, it can be made only with the utmost of difficulty,—or, if readily made, must almost certainly be erroneously made. Monopoly goods, in the sense of land or of high ability, are cost goods in either type of reckoning, to the extent, at least, of the alternative applications. But in the competitive economy, any production good is a cost good to the extent that it necessitates a cost outlay to command it. In the accurate

[25] Wieser, *op. cit.*, p. 175.

sense, indeed, the displacement principle applies here; the productive good could have served in the hands of another entrepreneur; the expense incurred by the renting entrepreneur might have been otherwise directed.

This is perhaps the point at which to discuss a forcible and plausible objection against regarding as a cost the rent paid for a good having only one productive application, the cranberry patch, for example. It may be speciously urged that the rent advanced by the tenant, or foregone by the cultivating owner, while a cost charge in the individual reckoning, and in that sense a cost, has yet no cost-causal bearing upon market value; the land will be used by someone; the rent is not a condition to the productive functioning of the land; it will be used by some other cultivator, if the present cultivator refuses the rent outlay; our cranberry patch, being good for nothing for any other purpose, cannot be driven, because of low rent, into other uses, and will remain in the cranberry service, whether or not the owner sell, or the tenant abandon to another cultivator; the cranberry patch is therefore not a fact through which the supply term of the value equation may evince any of that flexibility whereby prices receive their modification.

But evidently thus much might be argued for capital and for its remunerations, with only a long-run distinction possible for such lands, if there are any, as are independent of upkeep and incapable of exhaustion. But there is no reason why cranberry land, or any other cultivated land, or any form of specialized instrumental good, may not, with time enough, be exhausted; that is to say, most instrumental goods, however specialized, are in the long adjustment mobile in their capital-value aspect.

But it must be admitted that goods of no alternative use differ from other goods with respect to the effect of a diminishing demand for products, that is, differ with respect to the degree of elasticity in supply, but differ nevertheless only in degree. With falling prices, some acres, or what amounts to the same thing, some intensive possibilities, of the cranberry field will be abandoned,—will not, it is true, go into other lines of product, but none the less will go; the labor and capital—the expense—go in part elsewhere; and if the entrepreneur departs leaving a new

tenant to follow him, this new tenant will fail to utilize the land at the old degree of efficiency, at the same tension of productive power; and the new tenant is himself not as efficient a producer as the old,—was in fact outbid by the earlier tenant on the earlier level of prices, this earlier tenant now finding the cranberry enterprise at the present level of prices not worth his while.[26]

Supply conditions have then been somewhat disturbed. But the degree of bearing of costs upon value is in any case easily exaggerated,—which fact was in Mill's mind when he argued that only relative wages and relative profits should figure as costs. But if only those outlays not proportionate to efficiency rendered are reckoned as costs, the situation will become hopeless of analysis for cost purposes. Because of differences in entrepreneurs, and thereby differences in the relations of efficiency to outlay, and because of the different technological conditions of different lines of production, there is nothing for the case but to reckon all outlays as costs, and for that matter, also, all tediums, repugnances, and counter-attractions, whether absolute or relative.

But it remains true that only differences of cost, relative to efficiency, seriously affect the value outcome. We must, however, view as costs all that the entrepreneur regards as burden in arriving at his choice of occupations, all that he charges up against the chosen occupation as a resistance to production and as necessary to be overcome in his market-price remuneration. All his outlays rank for him as data in making his choice between lines of activity. It is, indeed, only as working out through entrepreneur computations and entrepreneur competitions, that production goods of any sort acquire value or rental, or rank as costs, and come thereby to have their little or much bearing on the relative volumes of goods seeking exchange against one another. That there is, for any purpose, a not greater relative supply of production goods—whether of non-alternative use or of many uses—is the reason for relatively few products, high

[26] It is, however, true that cases may be imagined where no expense or labor of upkeep is necessary,—a cranberry patch, for example, where the more one should disturb it the less satisfactory would be the results. But even assuming such a case, the most that can be said is that it does not matter whether rent is or is not reckoned as a cost, since the supply is independent of all cost influences.

prices, and a high value level for the production goods in question. Ultimately cost is a way of expressing that we cannot have more of the agent unless upon more expensive terms—perhaps not even then—and can have what we have only upon the present terms of expense. But the explanation of the actually existing limitation upon the supply of production goods may or may not be in the diminutions and diversions due to other industries; it may simply be that there are no more agents. For the purposes of competitive production, Wieser's and Boehm-Bawerk's view that a good is not the basis of a cost unless the good has alternative applications amounts practically to saying that nothing can be a cost once that is not a cost twice. This view implies also that some distributive shares for employed agents are not costs at all, thus raising the question whether distribution need, on Wieser's own basis, have been treated prior to costs.

"Practically," Wieser says, "it would seem to come to this; that the imputation of the share due to the monopoly goods is made after that due to the cost goods is finished."[27] This appears to be Ricardo's old rent-and-cost doctrine, albeit possibly none the worse for that. But Wieser adds, though with precisely what significance is not at all clear, that

> it is only in the individual case that such a calculation can be made. . . . . A sufficiently wide consideration shows that monopoly goods come altogether under the ordinary conditions of valuation, and differ from other economic goods only that they display much more strikingly the character common to all. . . . . Only the greater part, not the whole, of the "undivided residue" is to be imputed to the good in question.[28]

Bearing in mind that, for the most part, the criticism here made attaches only to the relation set up between distributive shares, and bearing in mind also that, interpreting monopoly goods merely as scarcity goods,—non-reproducible goods,—there is no very considerable objection to be made to the doctrine presented in its bearing upon present issues, it yet remains to be repeated that, purely as distributive doctrine and subjected to the requirements of theroeti-

[27] Wieser, *op. cit.*, p. 110.

[28] *Ibid.*, pp. 110, 111.

cal accuracy, it will not stand. The entrepreneur is always in the background to share in or to take the residue in question; it therefore cannot all go to the hired scarcity good; the entrepreneur is himself a monopoly good for the purposes of the case; this makes two monopoly goods.[29]

As we have already seen, there is danger of confusing with each other two different sorts of land differentials, (1) the entire value differential measured from the rentless margin, or, as it is sometimes viewed, from the lowest-rent land in use; and (2) a quasi-rent form of differential expressing value-wise the superiority of land for one use over its best alternative use. This second sort of land differential, as representing no displacement, could not, in a collectivist economy, be computed as cost. The other differential, the ordinary rent of competitive production, would be irrelevant to collectivist computations. For questions of cost in the competitive economy, the case is just the other way about; all competitive rent paid is cost; the quasi-rent differential is *as cost* irrelevant.[30]

Wieser appears to confuse these two rent concepts, though this can be asserted only hesitatingly, because of the difficulty of being positive as to whether the discussion is in the collectivist, the natural-value, field, or in the field of competitive production. The early portion of his chapter on "Land Rent as Cost" [31] seems to imply that rent as a general differential of value productivity—rent measured from the rentless land margin—is no part of cost; which would be meaningless for collectivist purposes, and untrue for competitive purposes. But he asserts that "when all lands and all powers of the land . . . . bear rent," the rent must be included; and this also, as applied to collectivist production, must be untrue, irrespective of its seeming implication that all powers of the land can ever be rent-bearing. At the very close of the chapter, however, it is said:

[29] The same criticism applies to the following: "The personal income which land yields is, in the last resort, dependent upon the fact that the land in question yields a return such that, after the shares of capital and labor are deducted, there remains a share which must, on natural laws, be imputed to the land."—Wieser, *op. cit.*, p. 114.

[30] And there is really another concept of rent, the superiority of a particular piece of land for a particular use over the poorest of land devoted to that use; but this third form does not concern this particular discussion.

[31] Wieser, *op. cit.*, Book V, chap. xiii, p. 217.

"That the rent of land does not enter into cost can be legitimately applied only to land devoted of necessity to one distinct use, such as mines, vineyards, and the like,"—an accurate statement if intended only as a natural-value doctrine.

But upon the same page, in substantial conformity with the views already discussed of Mill, Jevons, Patten, Hobson, and others, but still not clearly in the competitive field, Wieser goes on to show that "if a fertile field is employed as site for a factory, the agricultural rent which in other circumstances might be expected from it . . . . cannot be neglected in calculating the costs of the factory's products. . . . . The differential rents which are surrendered take effect as costs." This appears, on the whole, to be competitive doctrine and as such is unacceptable: if it is really intended as collectivist doctrine, the talk should be of the products possible, and not of the surrendered rents.

CHAPTER XX

THE ATTEMPT AT RECONCILIATION: MARSHALL[1]

Marshall's treatment of demand price is a great advance over that of the Austrians, and is in the main firmly and consistently held, both in terminology and in essential thought. Whether so much can be said for his analysis of supply price is not so clear.

And there are some inadequacies in his discussion of the relation between utility and price, in that, at times, he seems to believe that price may, after all, to the individual, stand as a measure of marginal utility.[2]

[1] The 5th edition of Marshall's *Principles* comes to hand as the present work is passing through the press. It has not seemed practicable entirely to rewrite this chapter, nor—from such hasty examination of the new edition as has been possible—would this appear to be called for; thus, wherever in the new edition the original citation has been found without substantial change, the fact is so indicated by parenthetical reference.

[2] "The price will measure the marginal utility to each purchaser individually: we cannot speak of price as measuring marginal utility in general, because the wants and circumstances of different men are different."—Alfred Marshall, *Principles of Economics,* 4th ed., Macmillan, 1898, p. 174 (5th ed., p. 99).

And in criticism of Jevons, it is said: "He has led many of his readers into a confusion . . . . by speaking without qualification of the price of a thing as measuring its final utility, not only to an individual, which it can do, but also to 'a trading body' which it cannot do."—*Ibid.,* p. 176, note (5th ed., p. 101).

"For each of [two men, one rich, one poor] the marginal utility is measured by sixpence; but this marginal utility is greater in the case of the poorer man than in that of the richer."—*Ibid.,* p. 170 (5th ed., p. 95).

In fact, however, as Marshall would probably be the first to admit, the sixpence gives neither any general measure of utility nor any measure to any particular individual. The price that one is just willing to pay is an expression of the relation in utility of the good under consideration to other goods purchasable with the same money, but gives no information as to the absolute utility of any of these different goods.

Substantially, however, Marshall recognizes the real nature of the demand margin:

> The clerk who is in doubt whether to ride to town, or to walk and have some little extra indulgence at his lunch, is weighing against one another the (marginal) utilities of two different modes of spending his money.[3]

On the supply side the meaning is less easy to arrive at and the adequacy of the doctrine less clear.

In the line with the classical writers, Marshall has a doctrine of real cost, but in just what way, if at all, it is articulated with his doctrine of *money cost* or *expenses of production* is not evident. It is said that with labor conceived as the only productive fact, "the price required to call forth the exertion necessary for producing any given amount of a commodity may be called the supply price for that amount." But with labor and capital in co-operation,

> the exertions of all the different kinds of labor that are directly or indirectly involved in making it; together with the abstinence or rather the waitings required for saving the capital used in making it; all these efforts and sacrifices together will be called the *real cost of production* of the commodity. The sums of money that have to be paid out for these efforts and sacrifices will be called either its *money cost of production,* or, for shortness, its *expenses of production;* they are the prices which have to be paid in order to call forth an adequate supply of the efforts and waitings for making it; or, in other words, they are its supply price.[4]

This appears to say that real costs are the costs to the people who sell or rent their various services to the entrepreneur; while money costs are costs from the point of view of the entrepreneur. This is surely a valid distinction, if only, over against the danger of confusion through it, there are counterbalancing advantages. But is it true that the quantum of the sacrifice in effort and waiting has anything to do with the quantum of the payment? How close and how definite is the relation? Is there in real costs any basis for money costs? What is the connection? What is the reason that it

[3] *Ibid.*, p. 193 (5th ed., p. 118).

[4] *Ibid.*, p. 418 (5th ed., p. 339).

takes three dollars instead of two to command the day's service of a carpenter, or six dollars for the mason? Is it a matter of the effort pain purely, or has what the laborer can get somewhere else the more to do with it? The identification of supply price with the necessary price is admirable and illuminating. But why are these prices thus or so? Marshall leaves it to be inferred that the solution traces back to real cost; but he does not say so, nor does he attempt to trace any connection. And again, these money payments in compensation of the real costs seem to be identified with the supply price, the entrepreneur cost; this leaves, as part of necessary or minimum cost, nothing for the entrepreneur. But if "the supply price of a commodity is the price at which it will be delivered for sale" to those who demand it, this price must be more and other than mere expense cost.

But two or three pages later the normal supply price is presented through the device of the representative firm, its normal expenses of production being taken as the normal supply price, but these expenses being interpreted to include gross earnings of management.[5]

[5] Marshall, *op. cit.*, p. 422 (5th ed., p. 343).

This representative-firm notion is so widely accepted in later theory, and its influence so important for good or ill, that some especial attention is called for in order to determine the precise nature and content of the notion. Is it a long-time or a short-time concept? If the price of any particular time is determined by the cost to the representative firm of that time, is this to be taken as, for the purpose, an abandonment of the marginal analysis? What about the costs of the firms of lower grade? Do these firms fall short of receiving for their costs full indemnity from market prices? Or are their profits merely smaller, but adequate? And what is to become of these poorer firms? and when? and why?

Or if the doctrine points not to present costs and their explanation, but only to the long-time adjustment, are we to understand the representative firm to be one that, in the trend of competitive forces, is likely to acquire control of the market, a long-time best firm, or rather a long-time average firm, or a long-time marginal firm?

And whether or not the commensurability of price with marginal entrepreneur cost, rather than with cost on marginal land, is taken to hold in agriculture, is it to be understood that, in manufacturing, some better or best firm fixes the price? And if so, is this victory price to be regarded as expressing any cost quantum with respect to this better or best firm?

If the representative-firm notion is an abandonment of the marginal analysis, is it a substitution of the method of averages and

Since business ability in command of capital moves with great ease horizontally from a trade which is overcrowded to one which offers good openings for it; and since it moves with great ease vertically, the abler men rising to higher posts in their own trade,

normals? Or are we rather looking for the marginal cost of an average firm, long or short time as the case may be?

And if, because there are all sorts of ups and downs in business, normals and averages are to rule, why is not the average method equally valid for labor computations in the cost problem, the value of masons' or doctors' or lawyers' services coming to coincide with the wage or salary of the average or representative man in the occupation—taken at the time of his medium earning capacity?

And if we have in some sort to do with the average principle, shall we take the representative firm to be simply and merely an average firm, or the long-time average of pretty much any firm, or the long-time average of an average firm? And average in what respect? In size? In skill of management? In good fortune? In methods? In manner of organization?

But all these problems may perhaps reach their solution with the unfolding of the concept: precisely what is a representative firm?

"Though in manufacturing, at least, nearly every individual business, so long as it is well managed, tends to become stronger the larger it has grown; and though *prima facie* we might therefore expect to see large firms driving their small rivals completely out of many branches of industry, yet they do not in fact do so" (p. 371) (5th ed., p. 241).

"When a man has got together a great business, his descendants often fail, in spite of their great advantages, to develop the high abilities and the special turn of mind and temperament required for carrying it on with equal success. . . . . For a time, indeed, all may go well. . . . . By mere assiduity and caution, availing themselves of the traditions of the firm, they may hold together for a long time. But when a full generation has passed . . . . the business almost invariably falls to pieces unless it is practically handed over to the management of new men who have meanwhile risen to partnership in the firm" (p. 379) (5th ed., p. 299).

"The superintendence of labor is but one side, and often not the most important side of business work. . . . . The ideal manufacturer . . . . must have the power of forecasting the broad movements of production and consumption. . . . . He must be a natural leader of men, ... a power of first choosing his assistants rightly and then trusting them fully; of interesting them in the business and of getting them to trust him. . . . . The abilities required to make an ideal employer are so great and so numerous that very few persons can exhibit them all in a high degree" (p. 377) (5th ed., p. 297).

"It is obvious that the son of a man already established in business starts with very great advantages over others. . . . . It would, therefore, at first sight seem likely that business men should constitute a sort of caste" (pp. 378, 379) (5th ed., p. 298). "But we may read a lesson from the young trees of the forest as they struggle upwards through the benumbing shade of their rivals. Many succumb

. . . . in modern England the supply of business in command of capital accommodates itself, as a general rule, to the demand for it; and thus has a fairly defined supply price. Finally, we may regard this supply price of business ability in command of capital

on the way, and a few only survive; these few become stronger with every year, they get a larger share of light and air with every increase of their height, and at last in their turn they tower above their neighbors, and seem as though they would grow on forever, and forever become stronger as they grow. But they do not. One tree will last longer in full vigor and attain a greater size than another; but sooner or later age tells on them all. Though the taller ones have a better access to light and air than their rivals, they gradually lose vitality; and one after another they give place to others, which, though of less material strength, have on their side the vigor of youth.

"And as with the growth of trees so it is with the growth of businesses. As each kind of tree has its normal life in which it attains its normal height, so the length of life during which a business of any kind is likely to retain full vigor is limited by the laws of nature combined with the circumstances of place and time, and the character and stage of development of the particular trade in which it lies" (pp. 394, 395) (5th ed., p. 315).

But that all this is both truly and beautifully said leaves it still to be asked what it means for the purpose. Certainly there are all sorts of firms, and all degrees of flux and change among them; but so there are all sorts of wage-earners, of independent producers, of land, of machines; and it has sometimes been thought that by the very fact of all these differences, the marginal analysis is imperatively imposed. And does it at all matter to the doctrine that, more and more, the firm organization is giving way to the corporate? But to continue:

"There is no rule of universal application; but . . . . as a general rule subject to important exceptions, an increase in the total volume of any branch of production tends to increase the average size of the businesses engaged in it. . . . . Many . . . . economies depend directly on the size of the individual establishments engaged in the production. . . . . An increase in the aggregate scale of production of course increases those economies which do not directly depend on the size of individual houses of business. . . . . Correlated branches of industry . . . . mutually assist one another. . . . . The economies arising from such sources as this, which are accessible to any branch of production, do not depend exclusively on its own growth; but yet they are sure to grow rapidly and steadily with that growth; and they are sure to dwindle in some, though not in all respects, if it decays" (p. 396) (5th ed., p. 317).

"When we come to discuss the causes which govern the supply price of a commodity, we shall have to analyze carefully the normal cost of producing a commodity, relatively to a given aggregate volume of production; and for this purpose we shall have to study *the expenses of a representative producer* for that aggregate volume. . . . . We shall not want to select some new producer just struggling into business, who works under many disadvantages, and has to be content for a time with little or no profits, but who is satisfied with the fact that he is

as composed of three elements. The first is the supply price of capital; the second is the supply price of business ability and energy; and the third is the supply price of that organization by which the appropriate business ability and the requisite capital are brought

establishing a connection. . . . . Nor on the other hand shall we want to take a firm which by exceptionally long-sustained ability and good fortune has got together a vast business, and huge well-ordered workshops that give it a superiority over almost all its rivals. But our representative firm must be one which has had a fairly long life, and fair success, which is managed with normal ability, and which has normal access to the economies, external and internal, which belong to that aggregate volume of production" (p. 397) (5th ed., p. 318).

But does this mean that the price at any particular time must be the cost to this firm at this mid-time of its career? It seems so:

"The normal supply price of any amount of that commodity may be taken to be its normal expenses of production (including gross earnings of management) by that [the representative] firm. . . . . This is the price the expectation of which will just suffice to maintain the existing aggregate of production. . . . . A price higher than this would increase the growth of the rising firms, and slacken, though it might not arrest, the decay of the falling firms, with the net result of an increase in the aggregate production. And, on the other hand, a price lower than this would hasten the decay of the falling firms, and slacken the growth of the rising firms; and on the whole diminish production" (p. 422) (5th ed., p. 343).

But none of this appears to involve any appeal to representative or average phenomena; it is rather a typical marginal analysis; but—

"Anyone proposing to start a new business in any trade . . . . if himself a man of normal capacity for that class of work, ... may look forward ere long to his business being a representative one, in the sense in which we have used this term, with its fair share of the economies of production on a large scale. If the net earnings of such a representative business seem likely to be greater than he could get by similar investments in other trades to which he has access, he will choose this trade" (p. 449) (5th ed., p. 377).

This evidently takes the representative firm to be something like an average firm; and it is here said that any average man who concludes that in the trade in question he would turn out to be an average man, will go into the trade if he notices that the average man in that trade is doing better than average men outside. True, as a doctrine of opportunity cost; but it does not need the assumption of average men to be true. Any inferior or superior man will act in precisely the way outlined, if he believes that men of his grade are finding the trade in question more remunerative than other trades to which he has access. And there is nothing in any case to indicate that the cost of this average man will coincide with the price of the product, or to indicate that the cost of the marginal man will not so coincide. Thus the quotation as it continues presents a mistaken deduction:

"Thus that investment in a trade, on which the price of the com-

together. We have called the price of the first of these three elements *interest;* we may call the price of the second taken by itself *net earnings of management,* and that of the second and third, taken together, *gross earnings of management.*[6]

In substance this is evidently an opportunity-cost analysis of the reasons for the movement of entrepreneur ability and entrepreneur capital from one industry to another; it has no necessary relevancy to the representative or to the average firm, and depends for its correctness upon no assumption of this sort. Accurately, however, it does imply a firm or a situation where the wages of superintendence are only just large enough, etc.,—"the price the expectation of which will just suffice to maintain the existing aggregate of production," a marginal-cost price, as it would seem. But this appears not to be Marshall's idea, nor is it possible—to this writer at least—to make out quite precisely what the idea is; the notion of the representative firm appears to lack something in point of theoretical tangibility.

Perhaps, however, the doctrine points to a firm which, in the long-time adjustment, with all its ups and downs, will pass for a marginal firm. But whether this be safely assumed or not, Marshall's necessary price must be, on the full showing, taken to include more than mere outlays,—must be understood as allowing for the entrepreneur share. But we still await information as to what determines the

modity produced by it depends in the long run, is governed by estimates on the one hand of the outgoings required to build up and to work a representative firm, and on the other of the incomings, spread over a long period of time, to be got by such price" (p. 449) (5th ed., p. 377).

"The aggregate production for a general market is the outcome of the motives which induce individual producers to expand or contract their production. It is just here that our device of a representative firm comes to our aid. We imagine to ourselves at any time a firm that has its fair share of those internal and external economies, which the average scale of production in that trade will cause to accrue to such a business" (p. 514) (5th ed., p. 459).

This last quotation puts the case as, indeed, one of an average firm, but not, seemingly, a firm of average size, but a firm that by its ability or by its organization—whatever the size—strikes a fair average of the economies of productions; this average cost will, it is inferred, be the market price. But as the same page shows, the cost in question is the marginal cost of this average firm:

"This then is the marginal cost on which we fix our eyes;" and the marginal summary reads: "We thus get at the true long-period marginal cost, falling with a gradual increase of demand."

[6] Marshall, *op. cit.,* p. 392 (5th ed., p. 313).

amount of this share. Is real cost its basis, or is there an opportunity-cost reckoning somewhere in the background?[7]

In an earlier chapter,[8] it is aid: "While demand is based on the desire to obtain commodities, supply depends mainly on the overcoming of the unwillingness to undergo 'discommodities.' These fall generally under two heads: labor, and the sacrifice involved in putting off consumption." The "discommodity" in the labor is stated to include bodily or mental fatigue, unpleasant surroundings or unpleasant companions, injury to health, and displacement of recreation.

Now, while this account of demand and supply would, as we have seen, do for the social product conceived as a unit aggregate, it clearly will not apply to explain the purchasing dispositions with reference to different classes of goods relatively to one another, and will not serve to formulate the forces of resistance to the production of the various different lines of supply; as a method of elucidating the problem of the exchange relations between goods, nothing but confusion results from this affiliation of market costs upon real costs. Not only this; but while this catalogue of real costs unquestionably contains some items of true pain quality—costs in this *real* sense—the concept is wrongly permitted to include the loss of recreation pleasure, which is not a cost at all in the sense of pain, but only of oppor-

[7] On page 217 (5th ed., p. 142) of the *Principles,* Marshall writes: "It is broadly true that the exertions that any set of workers will make, rise or fall with a rise or fall of the remuneration that is offered them;" which may be true for each separate man under different levels of payment, but hardly true of different men relatively to each other, and hardly true of all men as affected by a general rise of wages; but Marshall continues: "As the price required to attract purchasers for any given amount of commodity, was called the demand price, ... so the price required to call forth the exertion necessary for producing any given amount of a commodity, may be called the supply price for that amount."

Now not only is there overmuch suggestion of labor-pain cost here but also it is difficult to make out whether Marshall at all recognizes the importance of alternative remunerations. He does not so indicate; the question seems to be one of absolute exertion rather than of relative, and this without attention to the alternatives in results; and yet in his analysis of demand price he has clearly and satisfactorily recognized the principle of competing and resisting alternatives of consumption.

[8] Book IV, chap. i, p. 215 (5th ed., p. 140).

tunity. And on the side of capital costs, also, there is a parallel error; the putting-off of consumption is a sacrifice of a present good, a resistance to be overcome, but it is of a different category from pain burden; it is merely a choice between two desirable things; it cannot safely be forced into the pain-cost, the real-cost, classification. Demand points to the sacrifices of purchase; cost, to all the sacrifices of production; but whose sacrifices and whose production? Here again, however, it is difficult to determine how far, on the whole, Marshall is open to criticism upon this point. For, in substance, he appears to abandon the doctrine of real cost as having any significance for exchange relations. He recognizes that much productive activity takes place entirely or mainly for its own sake, e. g., in literature and in science, that much more is performed for the benefit of others, and that "even where a man is working for hire, he often finds pleasure in his work; but he generally gets so far tired before it is done that he is glad when the hour of stopping arrives." [9] Perhaps even "he might rather work for nothing than not work at all," but *not generally*. But if at all, what becomes of the real-cost doctrine? Nor is there great help in the fact that there is marginal exertion and marginal production, for even so, the margin may be one of choice between pleasures,—nor help in the fact that the work willingly done gets paid by the measure of the rest, or, as Marshall puts it, that "the price of the whole is governed [?] by the sacrifice required from him by that part of the labor which he gives most unwillingly, and is on the verge of refusing to give." [10] This marginal resistance may still be wholly one of choice between pleasurable occupations, a cost by displacement of recreation.

[9] Marshall, *op. cit.*, p. 216 (5th ed., p. 141).

[10] *Ibid.*, p. 216.

Marshall's position as to the relation of rent to price forces him into some regrettable propositions in the direction of making marginal influences "determining" facts rather than mere "precisioning" facts; as, for example, when he says of the classical doctrine, "that the price . . . . is *determined* by the expenses or money cost . . . . on the margin of cultivation; and that rent does not enter into cost, these phrases are true in the sense in which they were meant. . . . . Those parts of the produce which yield a surplus will generally be produced even if that price is not maintained; while there is no surplus yielded by that portion of the produce the expenses of production of which do take direct part in governing the price."—Marshall, *op. cit.*, p. 477.

But when the rent-cost position is not in hazard, the correct

But whatever the doctrine of real cost may be taken to signify, it is at any rate clear that Marshall's analysis really accepts and adopts the point of view of entrepreneur cost: "The easiest as well as most practical course is to go straight to production for sale in a market." [11]

The undertaker cares little for real cost: "He thinks chiefly of the expenses of production and seldom pays much attention to the efforts and sacrifices to which those payments more or less closely correspond," and which constitute the "real" cost of production. "The modern business man commonly takes the payments which he has to make, whether for wages or raw material, as he finds them; without staying to inquire how far they are an accurate measure of the efforts and sacrifices to which they correspond." [12]

This should doubtless better read "to which they do not correspond;" marginal individual cost, the sundown margin, gives no hint of the degree of "real" cost, but only asserts the equality ratio between the utility of the product and the forces resisting the production, whether by burden, or by utility foregone, or by both. The different personal wages or profits are world-wide from the correspondence of remunerations to pains; it is a commonplace that the dirtiest and the most disagreeable occupations pay the least.[13]

doctrine gets its dues; after saying on page 427: "The remainder of the present volume will be chiefly occupied with interpreting and limiting the doctrine that the value of a thing tends in the long run to measure its cost of production," he calls attention to the fact that this is not precisely to say that it tends to be fixed or governed by its cost of production: "We might as reasonably dispute whether it is the under or the upper blade of a pair of scissors that cuts a piece of paper, as whether value is governed by utility or cost of production."

But this is not inconsistent with the view—for the most part held by Marshall—that the two margins together determine the price. But in a note on page 580, the case is admirably and accurately put as follows: "The withdrawal of iron from any one of its necessary uses would have just the same influence as the withdrawal from its marginal use."

[11] Marshall, *op. cit.*, p. 476.

[12] *Ibid.*, pp. 430, 431 (5th ed., pp. 351, 353).

[13] Despite the fact that the discussion here avowedly concerns itself not with the laborer's pains, discomforts, and sacrifices, but

But once again, what about the entrepreneur's services as items of costs? "In calculating the outgoings, the head of

with the employer's wage expenditure—not with the capitalist's forbearings and abstinences, but with the borrower's outlay of hire,—the temptation is yet almost irresistible to investigate the causes of the facts, to set afield to explain what, to the entrepreneur, are brute and definitive data, but which are evidently world-distant from ultimate resting-places for thought. Cairnes, it will be recalled, was so impressed with the ultimate character of human life, in its expression by effort and pain, so impressed also with the non-finality and non-reality of the entrepreneur point of view and computation, that, breaking with Mill, he abandoned it entirely as a significant cost category. Ricardo had based entrepreneur cost upon real cost, only by assuming—perhaps as self-evident, but at any rate without any attempt at proof—the proportionality of wage outlays to labor burdens; and as to the proportionality of interest compensations to abstinence claims he had greatly worried, but had on the whole believed the divergence not hopelessly wide. Marshall appears to follow Ricardo both in doctrine and in argumentative method.

But if the costs are not fixed by the pains, how then are they fixed? Pain and discomfort and ill repute have obviously something to do with the case, even admitting that they have not all. The mind will not rest contentedly and indefinitely at the superficial entrepreneur-cost level of explanation; we must somewhere turn from the mere opaque *how much* to ask the *why* of the *how much;* if we explain value by the value of the costs, shall we not somewhere find an explanation of the value of the costs? And if nothing else offers, shall we not take labor pain as explanation? And where can we reach bottom unless in terms of human life as expressed in human labor and in human pain?

But the level of explanation next underlying the mere entrepreneur *quantum* is the level at which, mainly, opportunity cost offers its service; but it is at this level that the *relative* pains and the relative pleasures and remunerations of different lines of activity have chiefly to be considered. How great a supply of any agent may be had in any industry or under any entrepreneur, and on what terms of outlay, is, no doubt, in part determined by the relative irksomeness or disagreeableness or ill repute of the employment in question; but in part, also, and commonly in much the larger part, by the relative remunerations possible in competing industries or under competing employers. That is to say, the seller of labor efficiency, like the land- or the capital-owner, computes his refusal price—in part or entirely—according to what may be had in another market or under another employer in the same market.

But it must be admitted that this opportunity-cost line of explanation, even when it is complete in its inclusion of all pain and pleasure and product aspects, is not ultimate; it explains some values merely in the light of competing values; it resolves values of products into values of costs. But, by going over to the supply of instruments, by the adoption of the standpoint of the employee rather than of the employer, it is so far better than the mere entrepreneur point of view, in that it does in some measure explain the entrepreneur situation. But are the values of the costs finally and adequately explained through this appeal

the business must reckon in the value of his own work," [14] but there is no suggestion that this value has any other basis than its *real cost,* its burden-pain significance. And, in point of fact, not all of the value of the entrepreneur's services can be computed as cost, but only that part which represents displacement, the opportunity of gain, or a recreation or other pleasure foregone,—the most desirable alternative; more accurately, the amount of money necessary, as against any other total of resistance or inducement, to keep him at the production in question, is the cost volume in question. What remains over and above this necessary compensation, the surplus called unnecessary profit or producer's quasi-rent, is no part of cost. And it is surely bad terminology to call one's own work, or the usance value of one's own property, an expenditure; but this is not a serious matter. Doubtless, however, Marshall, like Cairnes and like practically all other economists, appreciates that "the business man is constantly striving so to modify his arrangements as to obtain better results with a given expenditure or equal results with a less expenditure;" [15] and that individual effort has to be somehow allowed for as expenditure, or in some other way and to some extent be computed in cost.[16] But the application of the proposition to all the different outlays obscures, or altogether hides, its especially important theoretical aspects as applied to individual effort. And, as we have already had occasion to observe, this doctrine, if consciously held and thoroughly worked out, is the doctrine of opportunity cost.[17]

to the employees' competing value opportunities? The competing opportunities are themselves also value-derived rather than value-explaining. It is at this point that, as ultimate determinants, the situation, the actually controlling conditions, the man-and-environment general status of things, assumes its place as ultimately the causal fact.

[14] Marshall, *op. cit.,* p. 433 (5th ed., p. 354).

[15] *Ibid.,* p. 433 (5th ed., p. 355).

[16] Flux (*Economic Principles,* p. 52), Seager (*Introduction to Economics,* p. 157), Fetter (*Principles of Economics,* p. 274), and Seligman (*Principles of Economics,* p. 354) all adopt this extended sense of the word *expense;* there must then, it seems, be some advantage in it or excuse for it that the present writer has not appreciated.

[17] Fetter, Flux, Seager, Carver, and Seligman all recognize, more or less consciously and completely, this opportunity-cost aspect of necessary price.

Fetter: "The entrepreneur's cost determines the lowest price at

On page 449 (5th ed., p. 377) is a paragraph which looks somewhat toward the opportunity-cost doctrine. After remarking that capital (in the sense of the entrepreneur concept) goes in large measure toward building up internal organization and trade connections, and is altogether lost with the cessation of the concern; and that one who is starting a new business must reckon upon this chance of loss, Marshall says that a man of normal (average?) capacity may fairly expect his business to become representative (average? marginal? price-determining?) with its fair share of economies:

> If the net earnings of such a representative business seem likely to be greater than he could get by similar investments in other trades, he will choose this trade. Thus that investment of capital in

which he can continue to sell" (p. 274). However, Fetter also says: "Alternative cost is manifold and indefinite. The thought is significant at the moment of choice, but is not constantly measurable for practical purposes. Money cost is the practical cost" (p. 274).

Flux: "Supply price . . . . must be a price sufficient to cover cost of production, and if competition be vigorous, the excess over cost of production will not be more than sufficient to afford such profits as competitors need to secure in order to continue in competition" (p. 57); which says that necessary supply price is cost; but that each man must have as part of his necessary price something above cost, namely, what his competitors find to be a part of their necessary price; and that this first man's necessary excess above this necessary price is his profit.

Seager: "The expenses of production . . . . include minimum profits to the entrepreneur to remunerate him for his time and trouble" (p. 157). "The amount which should be charged as wages of management or minimum profit is what the entrepreneur could obtain for his services if he worked for wages or for a salary for a corporation or other employer" (p. 159).

Seligman's view is substantially like that of Seager: "The gross earnings would suffice to give him a bare compensation for his services, for otherwise he would enter into some other employment as a wage-earner" (p. 354).

But why assume, for example, that the next best tune that any man can play must be played upon someone's else violin?

Carver: "If a certain individual with a certain amount of labor and capital at his disposal can earn $1,000 a year by working for other people . . . . a piece of land upon which he with his capital can produce a total crop worth only $1,000 would be worth nothing to him, but one upon which he could produce a crop worth $1,200 would be worth approximately $200 a year."—Carver, *The Distribution of Wealth*, p. 188 (5th ed., p. 377).

a trade on which the price of the commodity produced by it depends in the long run, is governed by estimates on the one hand of the outgoings required to build up and to work a representative firm, and on the other of the incomings spread over a long period of time to be got by such a price.

This comparison is, however, of alternatives of capital investment rather than of personal remunerations; but as applying to capital, it may be open to the opportunity-cost interpretation. Still, strictly interpreted, the passage seems to say no more than this, that the long-run price depends on the proportion between the expenses on the one side, against incomings on the other. But whether the passage really covers, or is intended to cover, opportunity cost, Marshall makes later no further use of the principle.

RENT AND COST

Marshall's treatment of the relations of rent to cost is perhaps the least satisfactory portion of an admittedly masterly work.

He treats both extensive and intensive margins—when both are—as equally rentless and equally price-determining, without apparent wonder that the costs should be precisely equal in the two cases, both nevertheless being independent causes, and there existing no causal nexus between them: "Rent is here taken as another name for the *surplus produce* which is in excess of what is required to remunerate the cultivator for his capital and labor." [18]

But this statement strictly interpreted would carry to the landlord as land rent all producer's quasi-rents, in the sense of occupation differentials. And even though this form of quasi-rent receives scant recognition from Marshall, it still remains to ask what are the determinants and the measure of the remuneration required by the cultivator for his capital and labor.

These doctrines (that the price . . . . is *determined* by the expense or money cost . . . . on the margin of cultivation; and that rent does not *enter into* cost) do not mean that a tenant farmer need not take his rent into account. . . . . He must count his rent in just the same way as he does any other expense. What they do mean is

[18] Marshall, *op. cit.*, p. 477.

that when the farmer is doubting whether it is worth his while to apply more capital and labor to the land, *then* he need not think of his rent.[19]

But this argument would also exclude interest wages and profits from cost; for, as Marshall himself points out a few pages later, the question whether one shall push a piece of land harder or shall rent more land "is of the same kind as the question whether he shall buy a new plow, or try to get a little more out of his present stock of plows." This is the marginal problem with plows; this marginal use "pays nothing net toward the net income earned by the plow." [20]

But this is no more than to leave cost to be based on something other than payments for instrument services; and this would lead to the acceptance of wages as the sole basis of marginal cost.[21]

In point of fact, all that this doctrine excluding rent from cost amounts to is, either (1) that rent applies equally —if at all—to all the different costs of all the different producers in any *given line of production,* and thereby has no relative importance, since, as much as cost is higher or lower in rent, it is correspondingly modified in reverse order with regard to other expenses for other productive agents; or, (2) that when rent is paid there is a correspondingly and compensatingly larger product.

[19] Marshall, *op. cit.,* p. 478.

[20] *Ibid.,* p. 492.

[21] "A hop-grower, for instance, may find that on account of the high rent which he pays for his land, the price of his hops will not cover the expense" (p. 487).

"Land is but a particular form of capital from the point of view of the individual. The question whether a farmer has carried the cultivation of a particular piece of land as far as he profitably can; and whether he should try to force more from it, or to take in another piece of land, is of the same kind as the question whether he should buy a new plough, or try to get a little more work out of his present stock of ploughs. . . . . He weighs the net product of a little more land against the uses to which he could put the capital sum that he would have to expend in order to obtain it. . . . . That part of his produce which he is in doubt whether to raise by extra use of his existing ploughs, or by introducing a new plough, may be said to be derived from the marginal use of the plough. It pays nothing *net* . . . . towards the net income earned by the plough" (p. 492) (5th ed., p. 430).

But whether under (1) or under (2), the argument applies as only within a given line of production, and thereby can have no significance for the exchange relations between different lines of commodities, the only point at which any application can have any real significance; for the value problem is something more serious and more difficult than that of explaining the exchange relations of one bushel of beans or of wheat with another precisely like it. And what about capital goods? Marshall points out—and rightly—that for the short-time adjustment, capital goods bear the same relation to price as does land; the quasi-rents upon capital goods are no more a cost than are land rents, since in the short run the supply cannot modify appreciably. But here the difficulty is that wages also will, upon this reasoning, fall out of the cost category, unless upon the assumption of a computation long enough, in point of time, for population to have adapted in volume. And even then, all the different problems as to the relation between the supply of labor and the remunerations of labor would present themselves.

And worked out to its logical results, this rent-cost doctrine would imply that, as a long-time doctrine, all capital costs would finally disappear; for each producer is taken as devising and contriving how best to use his labor effectiveness in view of his abilities and of the environment with its opportunities, all conceived as means toward the productive result desired; shall it be this or that capital, or more or less of this or that? All costs thus resolve themselves ultimately into labor cost,—not labor-purchase or labor-value cost, but a fragmentary sort of labor-opportunity cost. And thus, under this principle, no indestructible fact, nor the compensation for any indestructible fact, nor any destructible fact for the term and the measure of its existence without upkeep, could figure as cost. And, finally, even labor could rank as destructible fact and its wages thereby function as cost, only under a reckoning long enough and at a rate of compensation low enough, if such level there be, so that laborers, failing to receive those necessary compensations,—computed according to some effective standard of life, or according to some minimum standard of subsistence,—should, in some measure, restrict their total number or effectiveness.

But probably no one would, by such heroic logic, attempt

to resolve competitive costs into any such ultimate labor-opportunity cost as this. In the competitive reckoning, any given entrepreneur must pay to his labor enough not merely to keep it alive, but to prevent its application, under some competitor, to the purposes of this competitor. And this appears to be as far as Marshall has thought it worth while to go. But this is an opportunity-cost analysis in the entrepreneur computation, which, upon the chosen level, calls for further application; for, under this reasoning, not merely the creation of capital, the upkeep of capital, and the improvement of land, but also the upkeep of land must be computed as costs, since otherwise the greater profit must be found in selling out the land piecemeal through the method of cropping and depriving of upkeep.

But if opportunity is in any manner or degree to be recognized, the computation can hardly stop with problems of displacement costs related solely to the original creation of production goods. The goods being once in existence, and the supply of them being—by assumption—incapable, for a period, of modification, something still depends on the degree of their specialization; and this applies irrespective of whether the goods in question involved, in their origin, any labor cost of production. Land, as we have seen, is, in a collectivist economy, the basis of a cost to the extent of its best alternative application; and were it in any way legitimate to carry over this computation into a competitive situation, the land use would, to this extent at least, function as cost in the competitive reckoning. In neither type of organization is it true that an instrument can function as a cost basis only after it has imposed a cost in its production. In any case, it is a cost to a collectivist society according to its displaced application; if produced, it had a cost under an earlier computation of displacement according to what might otherwise have been produced,—or, equally well, *at the margin*, a combined recreation-displacement and labor-pain cost. Under entrepreneur-cost computations, each productive fact is a basis of cost in any productive use according to the measure of what it costs the entrepreneur to use it in that particular way,—its highest displacement for him, whether this be expressed as its hire or as some outranking alternative application.

Thus, if Marshall's attempt to exclude produced appli-

ances or their hire from the competitive-cost reckoning were approved, the reasoning, logically extended to apply to labor and its hire, would result either (1) in admitting the labor as cost only up to the point of its best alternative of productiveness, or (2) admitting the wage as cost only up to the point of the wages obtainable in the laborer's next best occupation, or (3) in denying for the wage outlay any cost significance until time should elapse for a new generation of workers to come upon the scene.

> The classical doctrine may be restated thus: (1) The amount of produce raised, and therefore the position of the margin of cultivation . . . . are both governed by the general conditions of demand and supply. . . . . (2) But rent takes no part in controlling the general conditions of demand and supply or their relations to one another. It is governed by the fertility of the land, the price of the produce, and the position of the margin; it is the excess of the value of the total returns which capital and labor applied to the land do obtain over those which they would have obtained under circumstances as unfavorable as those on the margin of cultivation.[22]

This is in the main correct; *rents* do not affect price, in any ultimate sense; but the supply of land does, and, through the prices of products, affects land rents and land prices. So of wages and of interest, whether capital hire or time discount, the compensations are the result of the value contribution, as a question of the supply of agents and of the resulting products, as against the demand. So the fertility of the non-marginal lands with their quantum of product has much to do with the location of the margin. The conditions which make rent possible, and which affect the place of the margin, affect price, but ultimately speaking, not through affecting rents; rent is a cause only as the entrepreneur expression of the relatively limited supply of land instruments: the sequence is really the other way about. But rent is not "governed by the position of the margin," but simply reckoned from there; the price of the product is the proximate cause, but is itself the result of the whole demand for product over against the whole supply; and this supply volume traces back to the land supply as one of its causes. The causal sequence, in a competitive entrepreneur economy, runs, demand being assumed, from

[22] Marshall, *op. cit.*, p. 478 (5th ed., p. 427).

supply of land powers to the products of these powers, thence to price, thence to rents, and thence, under the time-discount principle, to the land value. This is, indeed, the sequence with all productive agents—supply of them, supply of products, price of products, pay of agent. Where, then, is the justification for reckoning any form of agent remuneration as a cost? In this, that to the individual seeking his most favorable application of his gain-making possibilities, all marketable agents contributing to the existence of things of value are the basis of cost hires; and these cost hires, to the extent that, through the necessity of them as outlays, they influence the individual's choice of occupations, are influences bearing as costs on the relative supply of products. It is true that, as bearing upon any individual's productive activity, it does not greatly matter whether he employs poor land at little rent, or better land at high rent, excepting so far as individual capacity or preference may play some part; but *as matter of capacity and preference* it does *somewhat* matter. The rent payment in either case makes a part of actual cost, and thereby forms a part of his basis of comparison of the costs upon various qualities of lands, and likewise forms a part of the data upon which his choice is made whether he shall produce one or another agricultural product, or shall produce some non-agricultural product as against any agricultural product. His cost of one product is, in the main, the alternative attractiveness of some other line of production, as referred to the test of highest net advantage. It is by this comparison that he chooses his direction of activity, and in this comparison he includes his rent outlays, precisely as, to arrive at the highest net advantage from competing opportunities, he takes account of outlays in wages, capital hire, time discount, taxes, insurance, royalties, or blackmail. In short, cost of production is a matter purely of the individual psychology—a complex of influences combining into the one problem, a purely individual problem, of how the individual in question shall to his best advantage direct and apply the gain-controlling powers and agents in his control.

But all of these cost outlays trace back, for their causation, to the conditions of supply of the respective agents in view of the opportunities for their application, which agents receive their market values,

their prices, through the competition of the different producers, inclusive of the producer especially under consideration. These market prices, socially established, stand to the individual producer as items of cost and as data, among other data, in view of which his choice of gainful activity is made. That is to say, it is by the intermediary of individual relative costs and of the resulting choices of activity, that conditions of supply among productive agents make themselves felt in the relative supplies of products, and thereby in the value of products, which value is reflected back upon the agents. Thus it is the limitation of the supply of agents—land, for example—and not the remuneration that is, on the cost side, the ultimate explanation of the value relations of products. Cost of production, in the competitive sense, applies here only to the sphere of individual activity, as tracing out, through the the individual's choice of activity, the influence of the supplies of agents upon the relative supplies of goods. As individual costs, all sorts of influences enter, including every kind of outlay, but the leading influence, by virtue of which producers become marginal, is opportunity cost, the attractive influence of other industries.[23]

And all of this receives occasional recognition from Marshall:

> The rise of ground rents in the district will thus be an indication of the scarcity of space which, other things being equal, will raise the price of retail goods; just in the same way as the rise of agricultural rents in any district will indicate a scarcity of land which will raise the marginal expenses of production, and therefore the price of any particular crop.[24]

> *The cost of production of the marginal* [*agricultural*] *produce can be ascertained without reasoning in a circle. The costs of production of other parts of the produce cannot. The cost of production on the margin of the profitable application of capital and labor is that to which the price of the whole produce tends, under the control of the general conditions of demand and supply.*[25]

[23] Of course, in the broader sense of the word, all alternatives of recreation or of rest or of avoidance of pain could be ranged under the opportunity-cost concept.

[24] Marshall, *op. cit.*, p. 488 (5th ed., p. 452).

[25] *Ibid.*, p. 479 (5th ed., p. 428).

Put in other words the argument seems to run as follows: Price is used to explain rent; therefore, if price is the result of cost, only that cost in which rent does not figure can be used to explain price. And so it should, then, follow, one infers, that if the selling-price of products explains wages, wages cannot be used as costs to explain price. And all this would be true if land differentials or labor remunerations were worked out from the isolated or collectivist point of view, instead of being a competitive adjustment of the value of the instrument or agent; but to the individual the rent is a datum, a fixed, opaque fact of cost, and is not a thing which *he* determines according to the price; and precisely the same reasoning holds with regard to his wage or hire or time-discount outlays; what is, for market purposes, for aggregate movements, a fact of distribution, a value derivative and imputation, is to him a fact of cost. His acts are results from the value situation which he faces and out of which as opportunity he derives his remunerations. That he and his costs and his decisions and his derivative productive activities are in turn and in their small degree reacting causes, he does not commonly appreciate or need to appreciate.

So far we have treated agricultural produce as a single commodity. . . . . But now we have to reckon for the competition between the different kinds of agricultural produce for the use of fertile soils. . . . . Each crop strives against others for the possession of the land; if any one crop shows signs of being more remunerative than before, relatively to others, the cultivators will devote more of their land and resources to it. . . . . Thus in equilibrium, oats and hops and every other crop will yield the same net return to that outlay of capital and labor which the cultivator is only just induced to apply. That "marginal" application which only just pays its expenses, and which therefore contributes nothing to rent, will yield equal net returns to the cultivator. For otherwise . . . . it would still be open to him to increase his gains by redistributing his crops. . . . . The margin of cultivation has now to be described as the margin of the profitable application of capital and labor to all land which the competition of other crops yields to oats.[26]

This discussion therefore abandons cost at all but the intensive margin; there is, in this sort of cases, no extensive

[26] Marshall, *op. cit.*, pp. 480, 481 (5th ed., pp. 434, 435).

margin; the most unfavorable conditions of fertility chosen for oats are, it is rightly argued, somewhat affected by the fact that, for the land that is capable of growing oats,

> there is so great a demand for other purposes that it affords a higher rent, when used for them, than when used for growing oats; . . . . land which would yield a good rent under them, but which yields a better rent under other crops. It is still true that rent is not an element in those expenses of production of marginal oats, to which the price of the whole conforms. . . . . Jevons asks (Preface to *Theory of Political Economy,* p. liv), "If land which has been yielding £2 per acre rent, as pasture, be ploughed up and used for raising wheat, must not the £2 per acre be debited against the expenses of production of wheat?" The answer is in the negative. For there is no connection between this particular sum of £2 and the expenses of production of that wheat which only just pays its way. . . . . When land capable of being used for raising one commodity is used for producing another, the price of the first is raised by the consequent limitation of its field of production,[27]

but not, Marshall rightly insists, by the rent payment,—that is, not in the sense of ultimate cause. The cost price, Marshall argues, is the cost at the intensive margin, and this margin is at a poorer level of land because of the use of the land for other things. And in any event, it is rightly urged, the rent, if it figures as cost at all, must figure not by what would have been paid if less had been paid, but by the actual amount that is paid.

It must be admitted that to show that rent enters into the individual's computation of cost is not to prove that it enters into the cost of the marginal product; and it is precisely here that Marshall takes his stand in the denial that rent is a part of cost-determining price. But by the same argument it can be shown that no cost enters into price-determining costs: "The amount of every item but one can be increased, and another unit of product be procured without any addition to the cost of that one item" (Fetter). And, really, it is not true that the item of product raised on rent-paying land is farther away from the margin of individual production, costs less, than the item produced upon non-rent-paying land; nor is it true that the item upon the intensive margin costs more than the item requiring less

[27] Marshall, *op. cit.*, pp. 482, 483 (5th ed., p. 437).

expense for capital goods and for labor. And it is not true that marginal cost controls or determines market value, or that the marginal item has any other or greater effect upon value than any other item. Price is fixed *at* marginal cost and not *by* marginal cost; it is the whole demand and the whole supply which equate at price; and in any case, the margin is always a personal margin, and not an instrument margin,—or only derivatively. In the competitive reckoning, the quantum of necessary remuneration for the entrepreneur's displacements and sacrifices is irrelevant to the question of whether the land is marginal or not; these costs are as likely to be upon supra-marginal as upon marginal land, and away from the intensive margin as upon it. It does not matter, that is, whether the land is good at high rent or poor at correspondingly low rent; and this again is equally true of capital goods or of labor. Nor, as a matter of individual cost—and here Marshall is clearly right—is it at all essential that the land have an alternative utility; it has, at all events, a value to other producers; the owner could rent it or sell it; the tenant's outlay for it is for him a displacement of other production, or, at least, of consumption; in some sense, narrower or broader, it is then an opportunity cost.

But two or three pages farther on we find the following:

> This argument does not imply that a manufacturer when making up the profit-and-loss account of his business would not count his rent among his expenses. . . . . For he may think that the saving in ground rent that he will make by moving into the country, together with other advantages of the change will more than counterbalance its disadvantages. In a discussion as to whether it was worth while to do so, the ground rent of his factory would be reckoned among the expenses of his cloth. . . . . It is no less true that in making up the profit-and-loss account of the cultivation of land, the farmer's rent must be reckoned as among his expenses. A hop-grower, for instance, may find that on account of the high rent that he pays for his land, the price of his hops will not cover the expenses of their production where he is, and he may abandon hop-growing, or seek other land for it. [And the land may then go to a market-gardener, who in turn hard-pressed by his rents] in his turn makes room for, say, a building company (Marshall, *op. cit.*, pp. 486, 487) (5th ed., p. 450).

It is thus difficult to make out what is meant by saying

that, in its effect to make the producer marginal, rent is not as much an influence as any other cost. True, it is really the superior pull of market-gardening which takes the land from hops and diminishes the supply of hops; but precisely parallel is the case with labor or with capital goods; this pull gets expression through the competitive fixation of costs. The advantages of market-gardening outrank those of hop-culture; the rent is competitively fixed at a level to which the cultivation of hops cannot adjust itself.

QUASI-RENTS AND COSTS

Marshall's doctrine of quasi-rents, as indicating the returns upon capital instruments, while important and even epoch-making in the development of economic theory, is especially disastrous to the other portions of his theoretical structure. As we have seen, the doctrine is, in substance, that, for short-time purposes, capital goods receive an income of the same sort as that of land,—not as a cost, a price-determining fact, but as price-determined.

Obviously, this is a view of cost, perhaps not precisely collectivist in standpoint, but at all events regarding cost from some other point of view than that of the entrepreneur-producer of the finished commodity. Like Cairnes, who approached cost, not in the conviction that "the easiest as well as the most practical course is to go straight to production for sale in a market," but in the conviction that not what the employer pays for the labor, but the laborer's own discomfort in grief and groan, is the sense in which cost has to do with value, Marshall now goes over for his cost computation to the point of view of the producer of the capital rather than that of the borrowing entrepreneur. That is to say, Marshall holds that, as a long-time doctrine, improvements upon land and capital goods conform in *their* value to the law of costs; the making of *them* depends upon the prospect of the compensation to be had; in the long run, therefore, the cost value of the instrument must stand as a price-determining cost in its relation to the derived consumption good; but for short periods the capi-

tal good receives compensation parallel to that of land and is price-determined.

Perhaps one might object that it is the very gist of the long-time doctrine that the compensation even then is price-determined; but the long-time adjustment clearly gives time for cost influences to make themselves effective in the supply of instruments. The real difficulty is, however, that Marshall has changed his point of view; he is now discussing the ultimate determinants of the costs, rather than the costs as they present themselves to the entrepreneur; for it is true, as Marshall himself says, that the entrepreneur cares little for real costs; his point of view has no concern, as a cost computation, with the deeper and more far-reaching questions of the processes and influences through which the costs have come to be as they are,—the underlying and directive situation facts and the past adjustments within this general situation. For the entrepreneur, whatever he has to pay for a productive fact is the cost of it.

But even admitting the validity of Marshall's reasoning, —and for certain purposes, not entrepreneur purposes, its validity is beyond question,—we have again to ask whether wages are not paid upon precisely the same basis, and are not therefore, in the short-time view, equally quasi-rents, and equally to be excluded from value determination. And, in view of the possibility of wearing out almost any sort of land, the possibility also, with sufficient applications of capital, of producing almost any sort of land, and the necessity of constant capital applications in the way of land upkeep, does not this cost doctrine apply, in the long-time view, equally to land?

But no one more strongly than the ultra-modern opponent of classical doctrine would insist upon this quasi-rent principle. It applies to all agents; the seeming of price determination by the hire of the productive fact is merely an aspect of the entrepreneur process. And so it is true, as Marshall points out, that, irrespective of past costs, there may be machines barely worth using and thereby giving no surplus of any sort, and that the value of other appliances is in the nature of a differential measured from this value-less-capital margin.[28] But it is equally clear that there is, in this sense, for labor a wage differential measured from

[28] Marshall, *op. cit.*, p. 494.

idleness or from total inefficiency, and that all remunerations are the expression of a market value in the agent just that much greater than nothing.[29]

So, at all events from the point of view of the individual, Marshall seems to admit that there is no better reason for excluding rent than interest from cost. But "from the point of view of society," he sees a difference. "Land is a *fixed stock for all time*," [30] while capital is within control and is elastic. But while this is true in a loose way, —that is, it is true that the land supply has not the same degree of elasticity as most other capital goods,—this has no significance for the cost doctrine of any particular situation, for the analysis of the value adjustment taken for a cross-section of society, though it may point to changes later to take place in some of the elements of costs, and so may foretell important modifications of the terms under which at a later time the value problem will have to be worked out.

And so, while Marshall admits that "the hire of a pony is the excess of its value over the hire of a pony which is so weak as to have no hiring-value at all; the hire of ponies, like that of land, is governed by the value of the services they will render," [31] he regards this as only for the time; in the long run, the value of the ponies will be modified as cost influences make themselves felt through the changing supply of ponies. Ponies as a rule will yield no surplus above normal profits; not so with land.

But note that Marshall's position is, after all, that it is not so much so with land; for he says at the bottom of the

[29] "The earnings of every kind of capital goods can be brought into the form of surpluses, or differential quantities. . . . . The positive power of each bit of land to create wealth fixes the rent of it, just as the positive power of each unit of capital to create wealth fixes the value of it. The lowest grade of every instrument produces nothing, and is a no-rent article. Higher grades of every instrument, land included, produce something; and if there is any advantage in calculating the amount of that something by saying that it is a product of the good instrument minus the product of the poorest one, that calculation will always yield a correct result, since the product of the poorest one is nothing. . . . . All wages are rents of labor. . . . ." (Clark, *The Distribution of Wealth*, p. 346.)

[30] Marshall, *op. cit.*, p. 493 (5th ed., p. 431).

[31] *Ibid.*, p. 494.

same page: "The supply of fertile land cannot be adapted quickly to the demand for it, and therefore the income derived from it may diverge permanently much from the normal profits on the cost of preparing it for cultivation;" which leaves the distinction between interest and rent in their relation to cost one of degree only, and not of fundamental significance, and leaves labor and wages to be assimilated, for cost purposes, rather to land and rent than to capital and interest.

But nevertheless there are differences to be taken into account between long and short periods with regard to the adaptability of supplies of agents through the mechanism of costs. But, however and whenever the entrepreneur hires his appliances, the rent paid by him is the market value of the agent's service; and dear or cheap, his payments are costs to him. And thus, what Marshall formulates as true only of the long run, is really true for every case: "The income that is derived from capital in this form [specialized capital goods] enters into the payments by which the expenses of production of the commodity in question have to be covered." [32]

And Marshall asserts that, in a stationary state of society, the income of any appliance, being correctly anticipated beforehand, would accurately correspond to its cost, and thus

> the aggregate expenses of production might then be found either by multiplying these marginal expenses by the number of units of the commodity; or by adding together all the actual expenses of production of its several parts, and adding in all the rents earned by differential advantages for production.[33]

Notwithstanding that this is a statical analysis, it nevertheless seems to abandon all that has gone before.

The difficulty suggested a page or two back, that, according to Marshall's reasoning, wages should be regarded as in the nature of a rent or of a quasi-rent, and as such should be dropped from his cost computation, or at all events from the short-time form of it, requires some further consideration.

[32] Marshall, *op. cit.*, p. 495.

[33] *Ibid.*, p. 520 (5th ed., p. 810).

In Book VI, chap. v, Marshall discusses the "so-called rent of labor," and regards this as "the question under what head to class those extra incomes which are earned by extraordinary abilities." Whether or not he is justified in his assertion that "this analogy is valid and useful so long as we are merely analyzing the component parts of the income earned by an individual," it is for his purposes safe to say that "we are not at liberty to treat the exceptionally high earnings of successful men as rent, without making allowance for the low earnings of those who fail;" for it must be remarked that he is discussing the influences which restrict or recruit the labor supply for any particular line of activity: "for the supply of labor in any occupation is governed, other things being equal, by the earnings of which it holds out the prospect." With these remunerations in view, the youth and his parents, in selecting his occupation, "are very far from leaving out of account the fortunes of successful men. These fortunes are therefore part of the price that is paid in the long run for the supply of labor and ability that seeks the occupation; they enter into the true or 'long-period' normal supply price of labor in it." But in the short run, these extra incomes are rents—"do not enter directly into the marginal expenses of production of the goods, nor therefore into their price; they are governed by that price, and therefore are rather to be regarded as a quasi-rent. But the same is true of the special net return of acquired skill."

Doubtless wages are a rent in the sense of an efficiency remuneration; but in this sense, there is no justification for taking anything but absolute inefficiency as a margin. In Marshall's view, however, of the return upon acquired skill, the idea is one of the investment of capital, the efficiency out of which the rent arises being regarded as an addition to the native endowment. But Marshall elsewhere points out that

> when an artisan or a professional man has exceptional natural abilities, which are not made by human effort, and are not the result of sacrifices undergone for a future gain, they enable him to obtain

a surplus income over what ordinary persons could expect from similar exertions following on similar investments of capital and labor in their education and start in life; a surplus which is of the nature of a rent.[34]

But notice that now the idea is of a margin measured somehow from the basis of ordinary persons, while before it was a differential by addition to original power. But why should not remuneration for any ability possessed without cost be regarded as, in its entirety, a rent? And what have ordinary people to do with the case? And *ordinary* in what grade of people or line of occupation? Walker, we recall, in his doctrine of entrepreneur rent, found his marginal man in the same line of production, though one does not readily see why, or why not, and denied that the differential profits, so measured, made any part of price-determining cost: "So his doctrine would appear to mean only that that part of the employer's income which is due to exceptional abilities or good fortune does not enter into price;" [35] in all of which Marshall appears to concur, excepting with the reservation that cost must include the blanks if it includes the prizes: "The argument, in so far as it is valid, applies to the 'rare ability' of the earnings of all kinds of labor as much as of earnings of management." [36]

[34] Marshall, *op. cit.*, p. 704 (5th ed., p. 621).

[35] *Ibid.*, p. 705, n. (5th ed., p. 625, n.).

[36] *Ibid.*, p. 705, n. (5th ed., p. 624, n.).

Macfarlane (*Value and Distribution*) accepts the notion of quasi-rents in wages, regards these quasi-rents as price-determined, and interprets them not as differentials of advantage in favor of the chosen employment as against the next best alternative, but as a differential in favor of one employment as against another (p. 311). But merely as higher remuneration for higher efficiency there is no room for a distinction as far as costs are concerned. And as Macfarlane's acceptance of Walker's notion of entrepreneur differentials is unfortunate, so likewise must be regretted, not the unwillingness to accept the term *profit* as applying to this differential, but the reason for this unwillingness, viz., that Walker's terminology breaks with the alleged tradition that profit, in whatever variety of meanings, is constant in one characteristic, that is always a part of cost (p. 135). But surely there is no complete consensus of opinion here; for example, Mill sometimes, and Hadley always, are to the other effect; and, as we have seen, the truth appears to be that profit distributes into cost and non-cost elements, into necessary and unnecessary profit.

But aside from the fact that Marshall's doctrine is within the field, not of entrepreneur costs, but of the conditions underlying and determining these costs, it is to be said that the whole argument misconceives the nature of marginality in choice of occupations. A man making $5,000 a year may as well be marginal as one making barely what he could command as wage-earner.[37]

[37] *Quasi-rents and costs.*—In view of the principle that all competing producers, no matter what productive agents they may hire, must pay for the services obtained the market value of these services, it is difficult at first thought to see even a remote justification for the notion that rent does not enter into the determination of price. If there is any distinction possible here between land on the one side and labor and capital on the other, it must be that the labor or the capital will go, not merely to another producer, if it is not paid a satisfactory rate by the producer in question, but will go into another industry if not paid an adequate rate in this one. But this holds equally with lands; most land is less specialized than most capital goods and than most forms of skilled labor. From the displacement point of view, therefore, whether in the competitive or the collectivist computation, land is as rightly a basis of cost as is capital or labor.

But in the degree that any agent, whether land, labor, or capital, is specialized in its adaptations, there remains something to be said for the rent-cost doctrine from the point of view of a collectivist society. And even in a competitive economy, may it not be true that, viewed in the large as a question of society in the aggregate, such part of the compensation of any productive agent as is more than that agent could earn elsewhere, such part as is purely an employment or occupation differential, is a price-determined and not a price-determining charge? But it is well to see that if such is the truth, the doctrine goes disturbingly far. For almost all productive agents are specialized in some degree; there is in most cases a differential in favor of the current and actual employment; the alternative use represents, as a value displacement, an appreciably smaller sum of value. Put in other terms, most incomes, *regarded from the point of view of the income-receivers,* are greater as incomes than as costs. These quasi-rent quantities attach with many forms of intermediate goods, with most machinery, and with by far the larger share of labor agents. The doctrine holds true not of land alone, but, to an even greater degree, of much capital, much labor, and of almost all professional activities, and of all or nearly all managerial ability.

It is, indeed, fairly clear that if in costs we abandon the point of view of him who pays the costs, and go over to the question of cost from the point of view of the recipient of the remuneration, the income-collector, and attempt to distribute these incomes into cost and non-cost categories, we shall have, for competitive purposes, a worthless computation applied to the solution of an unsolvable problem.

But in point of fact, the distinction between value-determined and value-determining distributive shares is as worthless as it is unwork-

Marshall's discussion of land rent as income requires no very protracted consideration. It must, however, always be a source of error, though not necessarily of very serious error, to assume as basis of the discussion that the tenant farmer is a man of normal—whatever that may mean—ability and enterprise for that particular class of tenancy; and that if he rises above that standard, he will himself reap the benefit; "if he falls below it, he will bear the loss." So far as there is truth in this, it is self-evident,—which is no objection to it; but surely the normal man has no significance in this connection, since normal men do not make the price offers against which the successful tenant has to bid in his competition to rent the productive agent.

Out of the income derived from the land, the landlord, it is said, obtains a share,

> governed, for all periods of moderate length, mainly by the market for the produce, ... and it is therefore of the nature of a rent. And that part which the tenant retains, is to be regarded, even for short periods, as profits entering directly into the normal price of

able. In the broader view, all agents are value-determined in their remunerations, that is, the value of each is the result of the total situation in which each as cause has exercised only an infinitesimal, or at least an unimportant part. But none the less each is in its minor share a cause; each item of supply or of demand, precisely because it is a part of the total supply or of the total demand, has its effect upon the price; no marginal item, either of demand or of supply, has more to do with the price than to change the price, to the extent of one item of result, from what the price would otherwise have been. Is it true that the last straw breaks the camel's back? or, if with nine boys upon a raft it barely floats, is there profit in inquiring whether, when a tenth boy jumps on, he sinks the others or is rather sunk by them? or whether in the clash of contending armies, any soldier is sweeping forward or is being swept? or in attempting to decide whether, when the scales are finally tipped, the marginal increment of goods is motion-determining or is motion-determined? True it is that the rent of land or the wage of labor is a derivative from the value situation,—is price-determined in this sense; but equally true is it that the supplies are larger and the prices lower because of the productiveness of this land, or of the effectiveness of this labor; and in no other sense than this is any agent or instrument price-determining.

There is nothing for the case but to keep in mind that all these incomes for hired agents are, from the hiring point of view, costs, since they express the market price, competitively established, of the efficiency service in value creation. All *remunerations* are price-determined, and all *agents* are price-determining, but as process, all this is worked out through entrepreneur methods and adjustments. There is ultimately no marginality anywhere in economic affairs, excepting with the mar-

the produce; because the produce would not be raised unless it were expected to yield those profits.[38]

Stopping merely to query whether the share retained by the tenant can accurately be spoken of as a part of the income "derived from the land," it remains to object that not all of the tenant's profit need be expected in order to induce the production, that is, not all the profit is cost. Some portion of this profit is commonly a personal differential, partly by virtue of peculiar adaptation to the land—renter's quasi-rent—partly a peculiar adaptation to the crop as against any other crop, partly a peculiar adaptation to agriculture as against any other line of occupation,—unless of course, the talk is of a marginal entrepreneur, which case, however, cannot be in Marshall's thought, since marginal production, in his scheme of things, takes place only on marginal land.

In summing up, it is to be said that Marshall's analysis of demand and of marginal utility is a great advance over

ginal entrepreneur, or with such agents as, through their relation to the entrepreneur and to his plans and circumstances, arrive in that relation at this position of marginship. And to conceive of agents of production in their relation to the plans and circumstances of the entrepreneur is to conceive of them as members of a productive group or complex, and as commanding their rent or their value by virtue of their importance as marginal items in making up this group complex.

But there is no reason to suppose that *all* agents of any productive sort *may* not command a quasi-rent of occupation or of employment. When an agent is marginal, it is so merely in the sense that its relation to the entrepreneur is such that he is on the point, if the price falls, of rearranging his production group and of dispensing with the services of this agent *as used;* but it does not follow, and, *for the purposes in hand* it does not matter, that the agent, if relinquished, may, under another entrepreneur, remain in the same line of activity, or may become in some other line of activity a producing agent, or may go out of use entirely. In any case some or all of the powers of the agent will cease to be utilized if price falls; it is sufficient that through it some elasticity of supply obtains.

And just at this point it is worth while to repeat that the value margin of rentlessness and the margin of utilization do not of necessity, or even commonly, coincide. That an item of land or of machinery is rentless and valueless in the market does not imply that in the hands of its particular employing entrepreneur it is on the point of abandonment; there are possible quasi-rents of adaptation here.

And it may be remarked that for purposes of tax theory, and especially in the field of shifting and incidence, these quasi-rent quantities are of very great significance.

[38] Marshall, *op. cit.*, p. 716 (5th ed., p. 636).

that of the Austrians, and leaves little or nothing to be desired; but that his account of cost of production fails precisely because he does not apply here a parallel analysis of margins, that is, does not conceive of marginal cost as a ratio-relation in which secondary and competing demands are now of paramount and now of exclusive importance. That his emphasis is upon cost rather than upon utility is due to the fact that he has failed, as have the Austrians, to perceive that of utility and sacrifice, demand and cost, each is as truly as the other mainly an expression of ratios of marginal utility based upon opposing demands.

That Marshall's analysis of the relations between rent and cost is so unsatisfactory is due to the fact that he has not appreciated that cost as bearing upon supply is not a collectivist phenomenon, but is strictly an entrepreneur computation, and as such is exclusively within the sphere of the individual psychology, and that what, from one point of view, is not cost but income, a value-determined share, cannot be carried over to the other point of view without changing its significance and appearing as cost; and finally that with cost, as an individual reckoning, a producer may as readily be marginal upon non-marginal land as upon marginal land, or may as readily be non-marginal with marginal agents as with non-marginal.

CHAPTER XXI

THE ATTEMPT AT RECONSTRUCTION: HOBSON

In the main, Boehm-Bawerk's scheme of market analysis is followed by Hobson, to the extent of showing that rigid outside limits are fixed for prices: "But to fix limits for a price is not to fix a price and curiously enough Boehm-Bawerk leaves his analysis at this interesting point." Competition does not settle it; it is left to bargaining, and Heaven knows how it would settle if each bargainer knew his opponent's subjective valuations: "Why should either party give way? There is no economic method of reaching a price point here," though there might be a toss-up or a splitting of the difference. "Competition stakes out a ring within which bargainers fight it out by force and craft." [1]

On page 17 Hobson gives the first intimation of a view later prolific of much bad reasoning, namely, that "the effectual buyers and sellers whose subjective price limits lie above and below the limits within which a price point is fixed, and who, therefore, take part in the bidding of the market, have no direct influence upon the price." But the marginal pair—not pairs, Hobson rightly insists—are "those members of the market whose subjective valuation fixes the possible limits, etc."

The difficulty is, of course, with the word "fixes," and with the implication that the non-marginal traders have little or nothing to do with the case, which implication later appears to be Hobson's real position.[2]

[1] John A. Hobson, *The Economics of Distribution,* Macmillan, 1900, p. 16.

[2] This doctrine that there is an inter-marginal area of "forced gains," where competition does not rule, is also emphasized by Macfarlane (*Value and Distribution,* chap. v), and is correct for whatever it is worth; no Austrian would question farther than upon this issue of worth. It is true that the Austrian discussion of value, as an account

The long-time or normal price, as Hobson rightly urges, can give no assurance that the total gains of trade will divide equally between buyers and sellers. If the thing went by chance, it might be otherwise, but not so if the superiority in bargaining belongs permanently to one side. There is no reason for thinking that the long-time price

of the logic implicit in the market process rather than as an accurate description of the objective fact, assumes that, as the items of offer and demand become more numerous, this margin interval of higgling is constantly narrowed. A sufficiently minute gradation of both offer and demand is taken for granted—so near an approach to infinitesimals—as to justify the treatment of the selling-price as accurately a marginal price for both demand and supply. Admitting all the necessarily assumed conditions to be actual, viz., that all the commodities are of equal desirability, all the competitors in the market simultaneously, and "that the buyers and sellers make no mistakes about the actual state of the market such as would prevent them from really pressing their egoistic interests" (*Positive Theory*, p. 204); assuming, in short, a perfectly frictionless market, all this may be accepted, as a purely theoretical and logical account of the case; but it is, of course, quite another and a quite more dubious matter to assert that the point of adjustment expresses marginal utilities, or measures them, or is measured by them, and especially that it is *fixed* by them.

Hobson and Macfarlane place especial emphasis upon this inter-marginal area as a matter of very considerable practical as well as theoretical importance. And it is true that in many cases there is appreciable room for sheer bargaining skill and bargaining guile, and for oppressive use of this advantage; for really, no two horses are precisely alike, and "an actual horse market . . . . would not in fact result in the attainment of an exact market price for a given quality of horse." Nor is the gain of the purchaser dependent solely upon the discrepancy between his direct subjective valuation and that of the market—upon his mere consumer's rent. He is buying to sell again, and "*A* can only value the same goods at 20 per cent. more than *B* because he enjoys some trading or manufacturing advantage (objective) which enables him to put what he has bought to a larger *productive* use" (Hobson, *op. cit.*, p. 24). Again, as to the seller of horses, the supply is not infinitely divisible; "there are distinct and fairly wide intervals of valuation between the several units": but the purchasing medium is indefinitely divisible, which facts impair "the practical service of the whole mathematical treatment," unless with goods like corn or cotton. With these last, there is "a far closer and more effective competition between buyers on the one hand and sellers on the other, the result being that the limits between which ordinary competition breaks down are much narrower" (p. 37). And, more important yet, many markets are local or partly isolated in character, rather than in close touch with the world-market, as, for example, with highly perishable and with cheap and bulky articles; in such cases competition breaks down early. And there are rings and speculators; farmers,

will be a fair competitive price in the sense of excluding bargaining for gain: "Average the dealings of small money-lenders with their clients over a term of years; you obtain a normal price of such loans, but that price reflects a normal advantage possessed by such money-lenders." [3]

For problems of price change, Hobson's way of conceiving demand and supply is helpful,—supply, the rate of increase of stock,—demand, the rate of withdrawal, both flows rather than funds, with prices rising or falling as one flow exceeds the other. For any particular commodity the demand flow is best expressed as money. Value is thus no inherent quality, whether as regarded by one school as expressive of cost or by the other school as expressive of

miners, and fishermen sell to middlemen under conditions of feeble or non-existent competition, and are more or less at the mercy of shippers, importers, and wholesalers, or of patents, secret processes, and combinations: "These and similar causes render the conditions of free and fluid competition inoperative over a vast majority of the processes in the sale of goods" (p. 32). So with the renting of land or the borrowing of capital, with the wage contract, the contracts of author with publisher, of mistress with servant, of hotel-keeper with guest.

Again, the buyer is the holder of money as against the seller of a specialized commodity: "the urgency of a trade use is less than the urgency of a personal need." True, the buyer for personal consumption is often in the reverse case, having to buy now from someone who is not obliged to sell now: "so . . . . venders of refreshments or books in a railway station enjoy a distinct advantage in bargaining." But ordinarily "the uncertainty of finding a purchaser at a calculable price . . . . must be accounted the weakness of the seller as compared with the buyer" (p. 37). And "the scale upon which the large business is conducted enables it to employ skilled specialists in buying and in selling" (p. 39).

It is worthy of note that Hobson carries his idea much farther than Macfarlane in pointing out that the volume of commodities not susceptible of marginal valuation by stocks is not a minor quantity in actual business but is possibly even much the more important quantity. And it is doubtless important, not merely from a practical but from a theoretical point of view, that all this be recognized. But the failure of competition in the fixation of prices, while of vast importance practically and greatly in danger of overlooking, does not appear to have large theoretical significance; Hobson's criticism points to the necessary allowances to be made, for practical purposes, where, as is the usual case, actual market conditions, instead of being fully competitive, are complicated in some measure by monopoly influences.

[3] *Ibid.*, p. 57.

utility; the one theory, as Hobson interprets it, denies the bearing of all influences not acting through cost of production; the second theory admits influences from the cost side only so far as they serve to operate upon utility. One theory looks at costs as giving value; the other, regarding the problem from the standpoint of consumption, takes

the consumer's test of the valuable—utility—to refer it back as a property potentially existing in different classes of goods which are on their way to blossom into really useful goods when they reach the consumer. . . . . Stand at one end of the stream of industry, you see goods gathering cost as they pass from process to process in production, and then cost appears to be the value which is growing; stand at the other end, value seems only to emerge from the contributions which productive processes make toward the supply of consumables. . . . . All holders of a "cost" theory admit that valuable things must be useful, but this utility is only a condition; "utility" men allow that cost affects the value of all freely produced goods, but they maintain cost is the condition, utility is the efficient cause. . . . . It is difficult to comprehend why a change in the value of a stock of wheat, due to a favorable season or a new railway, should be attributed to demand, which has either not changed, or the change of which has been clearly consequent upon an enlargement of supply. If scarcity changes value by changing the marginal utility, why is not the cost factor a determinant of utility? In fact, value is affected "by changes proceeding from either side, and this distinction between causes and conditions of value has no ultimate validity." It will not do for the manufacturer to assume that goods will sell high solely because they are costly to make; and when "Mr. Beecham sells us pills which he perhaps correctly observes are 'worth a guinea a box' to us and yet, with a rare spirit of self-denial, consents to take 1 *s.* 10 *d.* he is regulating the price rather by the consideration of the cost to him than the utility conferred upon us."[4]

It is doubtless true that

from utility through demand proceed the very forces that direct and evoke costs. . . . . But though utility thus figures as the final cause of value, it is not rightly taken as the sole efficient cause or as the sole determinant of quantity of value attaching to a stock of goods,[5]

[4] Hobson, *op. cit.*, pp. 66–71.

[5] *Ibid.*, p. 75.

for the problem of the volume of the supply is still there. And cost is perhaps the more convenient business way of arriving at values, since every change in demand forces will express itself as a change in the costs against which the demand is equated, just as changes in cost will express themselves in utility. And Hobson insists that Dietzel, in his controversy with Boehm-Bawerk, was wrong in admitting that goods limited in supply get their value from their utility. Dietzel should have stood for scarcity also, it being true that only as explanation for scarcity has cost any significance. And so Marshall, in suggesting that, for short periods, our attention is best fixed upon demand, and for long periods upon supply, would be wrong if he had intended to imply that cost is in ultimate analysis more important than utility as a regulator of value; and in fact it is not clear that more or more enduring forces affect value from the production side than from the consumption side.

Thus far in all of this there is remarkably little that is not admirable, with the exception of the "fixation by margins;" but in the latter portion of it, there is too little or no recognition that changes in the demand for other lines of goods, say an increased demand, must have the effect to decrease the supply of the particular line of goods under consideration. It is in fact by the demand for other goods, —through the resistance of other industries,—that limitation is worked upon the supply of productive goods and agents in any given industry.

That Hobson does not here appreciate in its essentials this displacement or opportunity aspect of cost,—this resisting-demand aspect, is evident from his assertion that value in the individual economy may be treated as a case "of exchange worked out between the two sides of ourselves, the idle self, which shirks effort, the greedy self, which seeks satisfaction." [6] This formulation would be inadequate for any non-producing individual economy, say, the ordinary child or woman, or for him who finds pleasure in work and yet recurrently quits work because of the greater attractiveness of recreation. This last is truly a case of

[6] Hobson, *op. cit.*, p. 91.

cost in the sense of a supply-limiting influence, but in this sense only. The reservation Indians, after the government distribution of supplies, get at a system of valuation, each for himself, and a derivative system of exchange relations for the group as a whole.

Subjective cost and *subjective utility* are by Hobson distinguished from *objective cost* and *objective utility.*

> Subjective cost must be taken to consist of the actual effort of workers measured in terms of disagreeable feeling and regarded as a quantity, i. e., disutility in work, as estimated by the individual consciousness of the worker. Objective cost must be taken to mean the productive energy which attaches to this effort, referred for measurement to some objective standard, i. e., hours, foot-tons, etc.[7]

Apparently, then, no two things could be farther apart than *subjective* and *objective cost;* the case is, indeed, not one of contrast or of opposition, positive and negative, but rather of entire incommensurability, incomparability, and irrelevancy. Note also the use of the plural, "the actual effort of workers, etc. . . . . and regarded as a quantity." Is this a group notion of an absolute feeling magnitude?

Subjective cost appears to be the opposite of *subjective utility,* "the pleasurable feeling got out of consumption by the consumer," assuming, as perhaps we may—or may not —that the consumer and the producer are the same person. *Objective utility,* however, is not precisely the opposite of *objective cost,* the foot-tons of energy attaching to the effort of production; *objective utility* measures "the services of consumable goods by some objective standard, i. e., the power of sustaining life, or . . . . the actual heating-power in a hundredweight of coal." [8]

> [Now] while the subjective cost and utility which attach to the production and consumption of wealth are evidently the true measure of economic prosperity . . . . the operations of the actual business world, as expressed by money valuations, have direct reference only to objective cost [foot-tons, etc.] and to objective utility [life-sustaining or body-heating power and the like].

[7] Hobson, *op. cit.*, p. 99.

[8] *Ibid.*

But whatever this means, and whether or not it is true, no attempt is made to equate or to relate objective cost to subjective cost, to equate, that is to say, the expenditure of units of energy with the pain burden of this expenditure: "A given quantity of objective cost may be related to indefinitely divergent quantities of subjective cost;" workers are of all grades of strength and endurance.

So also there is little or no correspondence between subjective utility and objective utility; consumers vary widely in capacity for enjoyment and in methods of enjoyment, and with changes in age, financial well-being, and health, each man is for the purpose a different man; "food will vary in subjective utility from infinity to zero, according as it passes into the possession of a starving person or a fully fed one." [9]

Whether as criticism or as interpretation, it is at all events to be inferred from all this (1) that there is no market method of comparing, for market purposes, subjective costs with subjective utilities; (2) periods of time cannot, for market purposes, serve as measure of any sort of cost; (3) nor is there any machinery in the market for comparing goods according to life-sustaining power or pleasure-giving service, nor any machinery for comparing foot-tons of energy excepting in terms of price.

And so, objective costs not being comparable as outlay so as to *serve as explanation of value or of price,* and being comparable by the entrepreneur only in terms of price; and subjective costs not being comparable at all, since they are feelings of different persons; and objective costs not being reducible to subjective costs, or comparable with them, it only needs the following added: "A given quantity of objective utility will vary indefinitely when reduced to terms of subject utility." And yet somehow out of this, Hobson arrives at the notion that,

[9] Hobson, *op. cit.,* p. 101.

referring to our theory of Value or Importance, the terms will take the following setting:

Subjective Cost	Objective Cost		Objective Utility	Subjective Utility
Measured in units of undesirability of effort	Measured in hours, foot-tons, or other measures of output	Importance or Value	Measured in power of sustaining vital energy, or furnishing mechanical force, i. e., nitrogenous units, or degrees of temperature	Measured in units of desirability by consumers

It may well be that this exposition falls far short of doing justice to the actual meaning and doctrine presented by Hobson; for the present writer confesses himself to have not the slightest idea of what it all means. In the first place, it is not clear whether the discussion is intended to restrict itself to the field of subjective value. The chapter is entitled "The Subjective Basis of Value," and opens with the following words: "In order to mark the essentially subjective nature of the theory of value, it is, etc." And it is to be noticed that, despite the fact that subjective value, in the established sense, or in any intelligible sense, is purely an individual category, this "setting" given to the "value and importance" problem presents the case as in part a matter of "units of desirability by consumers." And directly following upon this "setting" or formulation, the discussion runs fully in terms of market forces and adjustments: "The first portion that is sold goes to satisfy the strongest desires of consumers, the next portion a somewhat weaker desire, and so on. . . . . Yet all portions have the same price and the same value." [10]

It is at any rate clear that this manner of analysis is intended and believed by Hobson to avoid somehow the difficulty facing the utility school, "to explain how, with a diminishing utility attached to the successive portions sold, the value and price of the part which serves the fullest use are as great as that which supplies a necessary of life." [11]

[10] Hobson, *op. cit.*, p. 102.

[11] *Ibid.*

The idea seems to be that value is a compound of diminishing utility and increasing cost, the two being held at equilibrium and equality by the fact that as the one increases the other diminishes, and vice versa:

> The first portion that is sold goes to satisfy the strongest desires of consumers, the next portion a somewhat weaker desire, and so on until the last portion that is sold satisfies the weakest desire, or, using the ordinary language, has the smallest utility attached to it. Yet all portions have the same price and the same value. . . . . Our tabulation which makes value=importance, shows that the importance attaching to all portions of the supply that are sold is equal. For as the subjective utility furnished by consumption of the later units of supply diminishes, the subjective cost of producing these has increased. The first unit of consumption which satisfies the strongest-felt need is rightly considered as taking off that portion of supply which would be produced if no other were produced, because it can be produced most easily. Each later portion . . . . satisfies a weaker need, but is produced at greater cost, and since cost plays the same direct part in assigning importance or value to an article as does utility, there is no diminution of value by a reduction of utility accompanied by a corresponding rise of cost. The last portion of supply with the least subjective utility has the highest subjective cost.[12]

This seems to mean that by as much as you enjoy a thing more you may be sure that its producer was less grievously burdened to produce it; and thereby it appears that your valuation needs be low: And with the later portions of the supply, one's wearied marginal appetite is saved from positive aversion only by the knowledge that the laxly regarded item was produced at the maximum of pain to its producer. And so the drunkard at feast could derive not even a minor enjoyment from his latest cups were he so fuddled as to forget that "the last bottle . . . . which furnishes the smallest satisfaction to the drinker, is the bottle the production of which represents the last hour's labor of the hardest-worked producer, i. e., has the highest subjective cost attached to it." [13]

But if, in our bewilderment as to what this may possibly mean, we incline to query whether, after all, the talk may not be purely in the field of individual production for

[12] Hobson, *op. cit.*, p. 102.

[13] *Ibid.*, p. 103.

personal consumption, an analysis of strictly subjective phenomena, the context will serve to negative the possibility. And even were it so, it would be hard to believe that the isolated producer attributes any satisfaction in a series to any particular item of productive effort, and esteems all items in the pleasure series equally, under the computation that as much as the pleasure of consumption is more by so much the pain of production was less.

LAND RENT AND RENT COST [14]

As will later more fully appear, Hobson stands, with reference to the land-rent and the rent-cost problems, for the following five propositions:

1. That there are land hires that do not enter into cost, and other land hires that do enter, that is, that there are price-determining and price-determined rents.

2. That both land hires and product prices are determined by a process of margin fixation.

3. That the determinant margin is an instrument margin rather than a personal margin; this, however, not quite consistently.

4. That the services of land, labor [and capital goods?] are reduced to a common denominator, that is, are funded in terms of productivity units.

5. That the fundamental principle in the analysis, the guide-thread for the labyrinth, the key doctrine in the problem, is the law of displacement cost, the alternative use of the productive agent, that which we have already analyzed as the opportunity-cost principle, applied, however, by Hobson, not in the competitive sense, but from the collectivist point of view and in the collectivist tenor.

Ricardo's method of finding price-determining cost at the no-rent extensive margin of land, whereby all rent could be regarded as the result rather than the cause of price, Hobson declares to be erroneous as based upon "a

[14] Hobson, *The Law of Rent as the Basis of Co-ordination of the Factors of Production,* Part I.

fallacious simplicity in the abstract setting given by Ricardo to his problem" (p. 119). Of the Ricardian assumptions, (1) that wheat is the only agricultural product, and (2) that this product is raised upon extensive-marginal land, neither is correct. But, as Hobson declares, were the assumptions correct, the conclusions deduced by Ricardo would be irrefutable.

"Neither of these assumptions is absolutely warrantable;" even were there no grazing use to absorb, as against wheat, the poorest grade of land, conditions might exist such that if "an increase in the population and the demand for wheat brings into cultivation all the land available, the worst land in use may or must bear an actual rent." This land rent, it is said, "will not be a differential rent, but a forced or scarcity rent. . . . . Such forced rent would evidently be reckoned as an expense incidental to all portions of the wheat supply, and would enter into the prices" (p. 120).

But the grazing use and countless other uses are really to be taken into account: "What really invalidates the Ricardian treatment is the fact that most land in use has several alternative uses or can contribute toward several different supplies" (p. 120).

That the Ricardian argument could in principle be as satisfactorily worked out at the intensive as at the extensive margin, we have already seen; and Hobson later turns his attention to this aspect of the case, and points out, among other objections, that a parallel line of reasoning could be equally well invoked to exclude wages and interest from cost. And surely the argument from the extensive margin is open to the objections raised by Hobson, as well as to others still more serious; the poorest of wheat land does actually pay an appreciable rent, and even were there any entrepreneur outlays justifiably to be excluded from the entrepreneur-cost computation, there is no very evident reason why, *as an extensive-margin argument,* this poorest-land rent should not be included.

But, as we have seen, Hobson does not greatly rely upon this objection; he is, indeed, clear enough that such condi-

tions might exist as to invalidate in this aspect the theoretical tenability of the Ricardian position, but he is not clear that such conditions are actually existent. Not all land anywhere available is yet in actual cultivation; the "supply contains more land than is required, some of which is slightly inferior to the worst land in use," so that under present conditions this objection "may be held to lie outside of practical economics for a country in open commercial relations with the world supply of land" [14]—which is certainly generous enough in concession—and to spare.

The serious difficulty, however, as Hobson sees it, lies in the second of Ricardo's assumptions, that of the wheat use as the only use necessarily to be considered in the analysis. Thus the issue is shifted to the significance of the alternative use.

The conditions, rightly insisted upon by Hobson as actual, may be illustratively presented as follows: Let the poorest wheat land in use command a 20-per-acre rent, with the better lands ranging at per-acre rents of 21, 22, 23, 24, 25, etc., up to 30; at the same time assume that fruit, gardening, and tobacco-culture and the building demand bear with such relative intensity upon the better lands that these, as they are better and better, have smaller and smaller differentials above the alternative use, that is, that the alternative differentials upon the 30, 29, 28, 27, 26, 25, 24, 23, 22, 21, and 20-hire lands are respectively $\frac{1}{10}$, $\frac{2}{10}$, $\frac{3}{10}$, $\frac{4}{10}$, $\frac{5}{10}$, $\frac{6}{10}$, $\frac{7}{10}$, $\frac{8}{10}$, $\frac{9}{10}$, $\frac{10}{10}$. Hobson insists, then, that it is the 30-hire land that is marginal, that all of its rent is cost rent, is price-determining rent, and that with the other lands, ranging down to the 20-hire land, the cost rents are,—

On the	29	hire	land	$28\frac{9}{10}$
" "	28	"	"	$27\frac{8}{10}$
" "	27	"	"	$26\frac{7}{10}$
" "	26	"	"	$25\frac{6}{10}$
" "	25	"	"	$24\frac{5}{10}$
" "	24	"	"	$23\frac{4}{10}$

[14] *Ibid.*, p. 120.

On the	23	hire	land	.....	$22\frac{3}{10}$
" "	22	"	"	.....	$21\frac{2}{10}$
" "	21	"	"	.....	$20\frac{1}{10}$
" "	20	"	"	.....	19

and that the price-determined differentials are $30-30=0$; $29-28\frac{9}{10}=\frac{1}{10}$; $28-27\frac{8}{10}=\frac{2}{10}$, etc., increasing to a unit of price-determined differential for the 20-hire land.[15]

[15] It must in fairness be said that Hobson does not himself put his case in the precise terms of the illustration offered; the details of the scheme of statement are not his, but those of the present writer; but the argument seems to imply them, and it is primarily and chiefly to the end of assigning to the argument its clearest, shortest, and most effective statement that this particular device of presentation is adopted. It must, however, be at the same time admitted that this manner of exposition is chosen in some measure with a view to bringing the issues of criticism into clearer and more telling definition. If any injustice is done, it may be pleaded that it is not intentional; but there is perhaps the more urgent call that whatever justification the facts afford be promptly submitted:

"Though the worst grazing land may pay no rent, the worst wheat land might be better for grazing than the worst grazing land, in which case it can only be obtained for growing wheat by paying a little more than its differential rent for grazing purposes; this rent for the worst wheat land will be a positive rent, and will enter into wheat prices; again, the worst market-garden land competing for a given market may be tolerably good wheat land, and, if so, the rent which it could get for wheat forms a marginal rent for market-garden land. So as we ascend to the higher and more special uses of land, we find that the differential rents must be measured, not from a no-rent margin, but from a minimum specific rent of a higher and higher order, until we get to city ground, which is measured from a minimum which must exceed the rent which that land could obtain for the best agricultural use to which it could be put" (pp. 120, 121).

"For the sake of simplicity I have assumed that the marginal rent is directly and exactly determined by the alternative use of the worst land in cultivation for each use. But this, of course, is not necessarily the case. It is not necessary that the worst land should have an alternative use; it may be some better land, enjoying a differential as well as a marginal rent, which occupies that position. The worst wheat land might obtain a marginal rent of 20*s.* per acre; superior qualities of wheat land might take higher rents rising to 40*s.* Suppose that some of the land rented at 30*s.* had another use which would yield a rent of 29*s.*; it is evidently this land which fixes the marginal rent; it must receive 30*s.* in order to induce it to contribute to the wheat supply, and the 20*s.* taken by the worst land measures its inferiority of wheat-growing power as compared with the 30*s.* land. It is possible that the 20*s.* land might continue to grow wheat, however little rent was paid; its rent is directly determined by the cost of keeping in the supply of wheat land the superior land at 30*s.* In such a case it will be the 30*s.* land and not the 20*s.* land which is the direct determinant of

Precisely where Hobson finds the ultimate forces of causation in the determination of the price of wheat is not readily made out; but it is clearly his view that, on the supply side, certain of these land hires, or, more accurately, certain portions of these hires, are to be regarded as causes of price rather than results, and that we must go to the market price of the land use, or of part of it, in order to explain the price of the product.

But (1) how are these price-determining land hires themselves determined, and (2) through what bearing and in what sense and to what extent are they price causes?

1. The determination of the value of the land use is held to be in principle precisely like that of the determination of the price of consumption goods, in the sense, that is, that both are market adjustments worked out under

price for the supply side in the market for sale of wheat-growing power" (pp. 123, 124).

"Now what about the 20*s.* land, the worst wheat land in occupation? . . . . It is quite legitimate to suppose that the owner of this land, having no available alternative at any price approaching 20*s.*, might have been willing to contribute to supply even if . . . . the rent per acre . . . . had been at 16*s.* instead of 20*s.* In such case it will be evident that it is the owner of the 30*s.* land who, in fixing for the supply side the price per unit . . . . determines the amount of rent per acre of the land at the margin of cultivation" (p. 125).

"The determining increment of supply is not necessarily identical with the worst land contributing to that supply, commonly known as the margin of cultivation. If the slackness of the demand for wheat causes a fall of rent, it is not necessarily the 20*s.* land which passes out of cultivation; it may be the 30*s.*, if the latter has an alternative use and the former has not. The actual determination of rent by this method is, of course, complicated by the fact that as a rule not merely one part of the land supply, but many parts have alternative uses to which they would succumb, were the price for one use to fall below a certain figure. But it is reasonable for us to assume that the price per unit of land use is always determined by the common position of one part of supply, which at that price is just induced to contribute toward that supply in preference to some others; the fact that at a different price per unit some other land would occupy this position need not concern us" (pp. 127, 128).

This is perhaps the opportune time for presenting a résumé of the different rent concepts, and, so far as is relevant to the present discussion, Hobson's system of terminology with regard to them:

Selecting out of our illustrative scheme the 30-hire tract or acre

entrepreneur bidding. True, the consumption good receives, on the cost side, its value from the value of the instrument; and from this point of view there is doubtless a distinction, in that the value of the cost good—in this case the value of the land—is not, through an appeal to cost fixation, as readily explained, either in whole or in part, as is the value of the consumption good. On the whole, indeed, the land hire appears, as we have seen, to be in part derived from price and in part a determinant of price. But at any rate, as a question purely of the process of market adjustment, there is a complete parallel between the price of the land use and the price of the finished consumption good:

In so far as the price of uses of factors of production is reached by competition and bargaining (and this is our hypothesis throughout), the mode of determining rent, interest, and wages will be

of land, the rent concepts applicable to it would catalogue as follows:

1. The entire hire, 30 shillings;

2. The differential hire above the poorest land in actual use, 30 minus, say, 5=25;

3. The differential hire above the poorest land in use in the particular line of production, 30—20=10;

4. The differential hire above the best alternative use, 30—30=0. (With the 20 land in our illustrative scheme, this variety of differential is evidently 1; on the cranberry patch of our earlier discussions, this differential would include the entire hire.)

"Now since it is convenient to retain the term 'margin of occupation or employment' to describe the worst or least efficient part of supply, some other term is needed to mark that part which occupies the determinant place in any given market. I propose to speak of this portion as 'the determining portion of supply,' and of its owner as 'the determining owner.' The worst land in cultivation for a particular supply will be described, in accordance with usage, as 'marginal land,' and its rent as marginal rent. 'Differential rents' will be the rents obtained by lands of superior productivity contributing to this supply, and will be measured from the margin" (p. 129).

But upon the assumption, actually made by Hobson, *that the lands are funded,* there is surely no occasion for ranking any of the lands as worse or better or as more or as less efficient than any of the others. And one is minded to ask which of the two it is, the 30-hire land or the owner of the 30-hire land, that is determinant; or, after all, is it not the 30 of product displacement that is determinant, the land hire being merely the competitive expression of the displacement? In collectivist production, at any rate, there are alternative productivenesses and differential productivenesses, but no rents, no hires.

essentially the same as that of determining the price of horses or wheat (p. 126).

But precisely because the consumption good is a good price-determined through its costs, it must be recognized that when

goods have been exchanged for goods, ... in order to understand more fully the nature of the bargain, we must regard any two commodities which have been exchanged as complexes of the various quantities of the factors of production that have entered into them in the various processes of production (p. 113).

This serves merely to emphasize that to understand prices, we must, on the supply side, with reference to land costs, determine the nature and quantity of the rent-cost elements in price; and thus we discover that

a bargain for the sale or the exchange of finished commodities will depend, as far as supply forces are concerned, upon the conditions of a number of preceding, underlying bargains for the use of different kinds and quantities of land, capital, and labor power (p. 113). We regard the hiring of the factors of production as equivalent to the sale of their use,

and thus as subject to all the possibilities of higgling, oppression, and forced gains (p. 114).

Where shall we be able to isolate a rent which is price-determining in its entirety, that is, without adulteration of any price-determined elements? But in any case, whatever rent comes to be selected as price-determining, it must, perforce, be a rent fixed through the market process of competitive entrepreneur bidding for the different land uses. And it is also to be understood that all these land uses are actually sold at the same ratio between their productivity which they offer and the price which they command; that is, they are all funded into units of land-productivity service:

In land, we must recognize that rent or price of land use is determined, just like the price of commodities, by the relative economic strength of buyers and sellers bargaining for a given quantity of land use and not for a given sized piece of land, though the language of these proceedings has reference to the latter. The sub-

jective valuations [offer prices and refusal prices] of a single owner and a single tenant (the final pair) fix the limit for the price of a unit of this land power, the stronger of the two fixing the price point (pp. 126, 128).[16]

Adopting, then, the supposition that "what is really sold in the bargaining between land-owners and cultivators for the use of wheat land" is not merely wheat-growing power or wheat-growing land but wheat land "as units of wheat-growing power;" that is, recalling that the land supply is conceived as a fund of abstract productive units—we turn to examine the process by which these wheat-land hires are adjusted. It is significant that for this purpose Hobson appeals to the concrete and actual and unfunded supply of

[16] But upon an earlier page (25), the criticism against the "whole mathematical treatment" was that it "rests upon the assumption of an infinite divisibility of supply. . . . . The fact that supply is not in any case infinitely divisible impairs the practical service of the whole mathematical treatment." Thus "it is easy to see that there is a far greater elasticity in supply and in demand in a corn market than in a horse market, a far greater variety of possible prices with a far narrower interval between them. This signifies a far closer and more effective competition between buyers on the one hand and sellers on the other, the result being that the limits between which ordinary competition breaks down are much narrower" (p. 27). But surely competition should, then, be perfect in the land market, upon the assumption that it is really funded into precisely equal, interchangeable, abstract, productivity units. The truth of the case, however, seems to be that Hobson regards land as funded for the purposes of cost theory, but as non-funded for the purposes of "forced-gain" theory:

"Wheat or wool . . . . will, in theory and usually in practice, rank as a number of separate supplies subject to entrepreneur bargaining . . . . goods which are held to be identical in size and quality. Now in the market for the sale of the use of labor or land no formal reduction to equal-sized units takes place. Though the real object of sale is a quantity of productive power in land or labor, what is nominally bought and sold is the use of so many acres or so many laborers. . . . . But while the bargainers express themselves in terms of acres or laborers, the real object of their bargain is the use of land power and labor power, and they are continually engaged in reducing acres and laborers to units of productive power when they buy and sell" (p. 114).

"It is admitted [by whom?] that what is really sold . . . . is units of wheat-growing power. The fact that the nominal subject of bargain is acres must not blind us to this undertruth" (p. 125).

If so, then so much the worse for forced gains; but Hobson does not so see the case:

"It is the owner of the 30*s.* land who, in fixing for the supply side the price per unit at 5*s.*, determines the amount of rent per acre of the land at the margin of cultivation"—the 20*s.* land (p. 125).

entrepreneurs and to their competitive bidding against one another; and it would thus seem that all the phenomena, forced gain or other, characterizing the price fixation of consumption goods must equally apply to production goods; this is, indeed, Hobson's view: "If we regard the hiring of the factors of production as equivalent to the sale of their use, we are confronted with the investigation of the market for the sale of the use of various supplies of land, labor, and capital" (p. 114).

But, if so, how shall productivity be funded unless also the utility in every particular stock or series of commodities be also taken as funded? This view must find its argumentative basis—if basis it have—in some sort of society-as-an-organism doctrine. And what, then, becomes of forced gains?

We have seen that it is the 30*s*.-per-acre land which is believed to determine the price, that is, under the conditions as assumed, not the worst land, the 20*s*. land, but the best, the 30*s*. land, this latter being the land upon the alternative margin:

> Suppose that some of the land rented at 30*s*. had another use which would yield a rent of 29*s*.; it is evidently this land that fixes the marginal rent. . . . . It is possible that the 20*s*. land might continue to grow wheat, however little rent was paid; its rent is simply determined by the cost of keeping in the supply of wheat land the superior land at 30*s*. In such a case it will be the 30*s*. land and not the 20*s*. land which is the direct determinant of price for the supply side in the market for sale of wheat-growing power (p. 124). The argument, ... though quite valid for showing that differential rents do not enter into price, lets into price any rents which are paid for the use of marginal land contributing to any supply. Land may be graded according to its economic uses; the differential rents will be included in the market (and even in normal) prices (p. 130).
>
> The subjective valuations of a single owner and a single tenant (the final pair) fix the limits for the price of a unit of this land power, the stronger of the two fixing the price point. This done, the rent per acre is determined by the net yield of land power in each grade of land. If the higgling of the market fixes the price of a unit at 20*s*., the best land available for that supply may yield two units of power per acre, in which case the rent per acre is 40*s*., the worst land only ½ a unit with a rent of 10*s*. per acre (p. 127).

But if this is true, it must follow that all lands are equally cheap and equally dear; and if so, all talk of areas, or of acres, or of tracts of any sort becomes irrelevant, 1,000 acres of poorer land being both the price equivalent and the productivity equivalent of 100 acres of a better grade or of 10 acres of the highest grade. This funding doctrine should, then, suffice to cancel all talk of marginal lands in any sense of marginal entrepreneur cost, or in any other sense than that of the nearness of the wheat land to the line of equal desirability for some alternative use. Under the doctrine as presented, all lands are equally expensive for wheat purposes, and, so far as entrepreneur outlays or entrepreneur grounds of interest are concerned, neither the 20*s.* land nor any other can have a non-cost element in its rental. Here, indeed, it becomes clearly manifest that Hobson's analysis, unconsciously collectivist in standpoint, really involves the entire abandonment of the entrepreneur point of view.

For mark how this manner of computing entrepreneur costs by the displaced potentialities of the instrumental goods will affect the entrepreneur computation when carried over into the labor and capital fields; for it is to be recalled that Hobson protests vigorously—and rightly—against "that general tendency of economic science, especially in England, ... to assimilate the theory of the sale of capital use and labor power to that of the sale of goods, but to mark off the sale of land use as subject to quite other economic laws" (p. 116).

> I propose to bring the sale of the factors of production under the general laws of value and of price. . . . . For this purpose it is necessary (1) to co-ordinate the three factors with reference to the conditions which regulate their price; (2) to show that their sales are in essence identical, as economic processes, with the sale of commodities (p. 117).

But if it is indeed true that the entrepreneur will reckon as his cost not his wage outlay, or some alternative open to him with regard to the application of his expenditure, but only the worth of what the laborers could respectively produce in their next most productive lines of employment, and if, out of his capital-hire outlays, the entrepreneur is to be allowed to compute as cost only such part of this expense as represents, say, what his cotton machinery would have produced in a woolen mill, there is an end of all hope that

any entrepreneur anywhere will ever be able to determine his own or anyone's else cost of production of anything.

The full significance of the alternative-margin analysis, as presented by Hobson, will be best appreciated if put in the form of a summary:

1. Through the determinant power of the margin, we arrive at a price-appraisal of 5*s.* per unit of land power, for the land powers in the marginal land,—the 30*s.* land, a 6-unit tract.

2. By reflection from this price, margin-fixed, we get the same price for all other equal land powers, and thereby a funded wheat-land-power productivity.

3. This marginal land, the 30*s.* land, also determines, on the land-cost side, the price of wheat, since this 30*s.* land was at the alternative-use margin, and held the position of marginal-instrument cost.

4. Having fixed the wheat price, and having fixed the rent accruing to those lands not themselves price-determining, this marginal land (or is it the owner of the marginal land?) apportions to these other lands their supra-cost differentials of rent income, that is, their rent quantities above their necessary (price-determining?) rentals, attributing thus to them,—in our illustrative scheme,—price-determined rents of from $\frac{1}{10}$ up to $\frac{10}{10}$. These price-determined services from non-determinant lands are thus, as it seems, cheaper, for cost purposes, than the services of lands nearer to the alternative use, and yet the lands are funded into equal productivity units.

And thus it appears that the marginal-land instrument, at the opportunity margin, is determinant and strategic to a degree not before appreciated even by the most pronounced advocates of the margin-fixation doctrine.

But despite the fact that this manner of analysis makes impossible the entire entrepreneur-cost category, it still remains unclear whether the determinant margin is presented as an entrepreneur margin or as an instrument margin. The supply of wheat being a stock of similar items,

its price was determined, on the demand side, not by the entire demand but by the marginal *bidder,* on the supply side, not by the entire supply and not by any marginal entrepreneur but by *the cost of production upon the alternative-use margin,* with the rent for this alternative use,—seemingly a rent for unfunded land powers,—functioning as one of the marginal and price-determining costs. The market value of *units of productivity* is thereupon fixed by the bidding of entrepreneurs for the services of these units, in view of the market price for their products. But here again it is the *owner of the land* upon the alternative-use margin—the land without an appreciable wheat differential—who, having *fixed* the price of the *wheat,* now in turn, in fixing the price *per unit of land use* at 5*s.*, determines the amount of rent per acre for the land at the margin of cultivation, that is, the per-acre rent of the poorest land in the wheat use; and better lands thereupon obtain their differential of income as measured from this margin, according to their differentials of productiveness in the unit schedule.

And thus it is on the whole evident why, with reference to the precise nature of this margin, Hobson says:

> Some other term is needed to mark that fact which occupies the determinant place in any given market. I prefer to speak of this portion as "the determining portion of the supply" and of its owner as "the determining owner" (p. 128).

Both, then, seem to be determining.

But there are other difficulties:

> Whether the determinant portion of supply of land be the worst land or not makes no difference; the price of land power and so the rent of different qualities of land, appears to be directly determined by the fact that some of the land has an alternative use, and that it may refuse to contribute to the supply unless a certain price is paid. But though the alternative price . . . . determines a lower limit of marginal rent, there is nothing to prevent the marginal rent rising higher than this. If the 30*s.* land has an alternative use, it is possible that use might yield only 25*s.*; now, though the owner of that land would consent to take 26*s.* rent, he may be able to get 30*s.*, because there is, for the time, an absolute scarcity of land available for this supply. In a word, he may be able, as the final seller, to take a forced gain of 5*s.*, which corresponds precisely to the "forced

gain" in the price of the horse in our analysis of a market for commodities. In such a case it might be best to distinguish the 5*s*. from the 25*s*., and to class it as a third form of rent (p. 129).

But this is really not a new—a fifth—concept of land rent; it is merely a landlord's quasi-rent subdivision of concept 1.

And now note the implications: This 30*s*. rent upon land having an alternative use of only 25*s*. becomes the land-cost determinant of the market price of wheat; at the same time the cleverness of this particular landlord, as achieving in bargaining a forced gain of rent for his own benefit, has enabled him, as determinant owner of the marginal land, to dictate the general price of units of wheat productivity, and to fix this price for all the different lands, with the result that all other lands as well as his own are achieving a forced gain of $\frac{5}{25}$ above their "lower limit of marginal rent." That this may be nonsense is not to the purpose; to deny it is to deny to the marginal land (or to the marginal owner—which?) the determination of the price of products and the general rent determination for the different qualities of land; and at the same time it is to deny the funding of land into productivity units.

But now as to the precise correspondence of these forced gains to the forced gains in the horse market: If there is the alleged correspondence, it is so much the worse for the horse case; for where are the other tenant bidders that, with funded lands—or without—this 30*s*. or 25*s*. land is left, with its 5*s*. width of higgling-margin, to the bargaining contest of this marginal pair? Or is it really assumed that, except to this one tenant candidate, the land is not 30*s*. land in point of desirability, but only 25*s*. land? But this would be to disturb the funding principle. And if the land is really 30*s*. land to him and to other tenants generally, if only they would act upon their interests, are the 5*s*., over and above the 25*s*. lower limit, really forced in the sense that they are unjustly gained at the tenant bargainer's expense? Or is the full 30*s*. the fair market value of the value-producing power offered for sale, so that at any rent less than 30*s*., there would be a forced gain for the tenant at the expense of the landlord? And if the land were worth only 25*s*. to other cultivators, but 30*s*. to this one, what should be regarded as truly and justly its worth?

The validity of the argument from the intensive mar-

gin to prove the non-cost significance of land hires comes in for searching examination at Hobson's hands. His line of reasoning in criticism of Mill and of Marshall, while perhaps not of greater interest than the foregoing, is of considerably greater cogency.

Not overlong insisting upon the fact that the argument which at the intensive margin excludes rent from cost "can be similarly applied to show that interest and wages do not enter into price," Hobson proceeds to the discussion of what he regards as the fundamental error in the entire "dosing" method of argument, whether one or another of the factors of production be taken as applied in the dosing fashion. His objection goes to the underlying supposition that any one of the three factors of production can be expediently and economically applied as the sole constituent of the expense dose. "The truth is that a certain harmony of combination of factors exists for various productive purposes; . . . . if there is a short supply of one of them at the former quality and price," one or both of the others will be substituted, but at an increased cost per unit of product; this must indicate that the proportions between the factors were wrong; it would have been better to have had more of the first:

> So when the final dose of capital and labor on a given piece of wheat land achieves a product which yields no rent, it means that with the same quantity of land use as sufficed for a smaller product, a larger quantity of capital and labor use has been combined; that as no more land use was employed, none was paid for (p. 138).

Or, better:

> We may consider a piece of land as containing various land powers, some high, some low, some powers so low that they require so large a proportion of capital and labor to utilize them that they only just pay to work. These low natural powers yield no net economic powers of production (p. 138).

The cost is then the same for products raised upon non-marginal land powers as upon the intensive margin, and vice versa, since upon the intensive margin so much

more capital and labor cost [non-land cost, entrepreneur-capital cost] is incurred as the land-rent cost is less.[17]

Or put it in still another way:

Suppose it [the extra product] is raised by a tenant farmer as part of the result of an extra last hoeing and ploughing on his land, it [seemingly] pays extra wages but no rent; if, however, instead of this extra hoeing and ploughing the farmer decided to hire one more acre of the same quality of land and spread the same amount of labor power over the larger area, the product of this last acre pays its rent but no wages. . . . . The labor of working the . . . . last acre of land is certainly remunerated by wages, and at the same rate as . . . . the other acres. Why, then, does it appear from the "dosing" illustration that the product of . . . . the last acre pays no wage? (P. 140.)

[17] No question can be raised as to the force and accuracy of this criticism for the purposes of the actual issue; but it is none the less true that the argument is not quite accurately made. There is, in fact, no best combination of productive factors; each entrepreneur has doubtless his own separate best, as depending upon his own personal equation, his total capital equipment, his credit, and his safe limit for using credit. But for each entrepreneur his best combination is a different one from that of any other entrepreneur, precisely because as entrepreneurs they are different; and with each entrepreneur his best combination will be a new and different combination with every change in the relative costs of the various instruments and agents. Perhaps, however, the dosing argument might avoid the entire force of this general line of attack by reformulating the dose application in terms of doses of expense—of entrepreneur outlay—as applied to the land.

But what is the size of the economic "dose"? Is there an intensive margin to the extensive margin of land?

If every other sort of land has its intensive margin, so must also the poorest of cultivated land and the poorest of pasture land; the pastured cattle are in themselves capital doses. Absolutely no-rent land must then be land receiving only infinitesimally small outlays of expense: *Unless* (1) marginal land does not, for the earlier doses of expense, fall within the law of diminishing value returns; in this case and up to this limit, the "doses" should rather rank as together constituting one dose; or (2) unless there is a limit of another sort to the subdivision of expense doses, a long-time, a season, or employment unit, adequate in point of amount to the duration of the undertaking in hand, and to the nature of the undertaking in hand; the first unit dose must at any rate be large enough to make practicable the undertaking of the business, its size and the time involved in obtaining results both being considered.

But in any case the dose is not a capital-goods dose or a labor dose but an entrepreneur-capital dose, a matter of quantum of expense rather than of the nature or the detail of the technological means or other means selected.

And why, also, when an extra dose of labor is applied to the land, assume that all the increase in product goes to remunerate the larger quantity of labor? If it be, indeed, true that more labor can now be applied to the land, why was it not before applied? The rent that was being paid before was paid on the basis of what the land was worth under proper utilization; and when it now comes to be so utilized and comes to produce what it ought all the while to have been producing, the belated increase in product is not to be regarded as due in its entirety to the new labor but also in part to the opportunity now belatedly utilized:

> If a tenant hires a piece of land and puts five doses of capital upon it when he ought to have put six, he pays a rent based upon the supposition that he will make a full economic use of the land, i. e., that he will put six doses on it. If, discovering his error, he afterward adds the sixth dose, he only appears to pay no rent out of its produce, because he has all the while been paying a rent based upon the supposition that he was working his land with six doses (p. 141).

The land use is thus the basis of part of the price-determining cost; true, no more is now being paid for the land than was before paid, but the price now being paid for a utilized land service was before being paid for a non-utilized service; one does not have to pay more for the land when adequately supplied with labor and capital than before when it was inadequately supplied:

> If I rent a piece of land in Picadilly, in which all houses are three or four stories, the rent I shall pay will take into consideration the capacity of the ground for building a three- or four-story house. If I choose to put a one-story house upon the ground, the rent I pay will be the same as if I had more fully utilized the site. If I afterward add stories, it will seem that I pay no rent for this extra accommodation, but in reality I have been paying it all the time (p. 142).

Hobson's argument here appears to be unanswerable for the issues as they must present themselves, if "doses" are to be regarded as doses of the separate productive factors, rather than as doses of entrepreneur capital applied in every case under the direction of individual and peculiar entrepreneur initiative. The different entrepreneurs are

bidding for the use of entrepreneur capital—money, or goods, or credit, each in terms of money—or of instrumental or other goods as reduced to the money denominator, and, as such, making part of the entrepreneur fund of capital. Each entrepreneur bid, whether for entrepreneur capital, or for instrumental goods reduced to terms of entrepreneur capital, is never accurately a bid to get more of anything to put with his land or his capital goods or his employed labor, but rather to put with his entire situation as a whole, with his productive complex as an aggregate, in which he himself is a part. Thus, one entrepreneur will be directing his capital funds to the hire, or purchase, of machinery, another entrepreneur to the hiring of labor, another to renting land or more land, another to the purchase of fertilizers, or of barns, or work cattle, or dairy cattle, or for insurance outlays, or advertising, or taxes, etc.

And out of all the entrepreneur activities in the supply of agents and instruments, and out of the entrepreneur competitions for the control of these agents and instruments, there undoubtedly come about market values for the raw materials, hires for the instruments and agents, a rate of time discount upon business capital, and a capitalization for such of the productive facts as are susceptible of capitalization.

Nothing, however, so far adduced denies that the entrepreneur in making his bids proceeds upon what is essentially the dosing method, if only the capital nature or capital denominator of his method be recognized. But even under this interpretation, Hobson is right in insisting that, in accurate analysis, neither the entrepreneur's maximum bidding disposition nor his actual price outlay is based upon or expresses any separate and specific productivity of the dose fact under consideration. Any separate productivity of this sort the entrepreneur himself could not isolate. He needs the fact in question to go along with his aggregate situation, his entrepreneur complex, and to become a constituent part of it; he can easily compute what he can afford to pay for the accruing advantages, due in part to the independent productivity—if there be any—which the new fact bears in its own right, in part to its added productivity in its new setting, in part also to the added productivity which the old facts take on in their new association and relationship; so far as the productivity is a matter of the interrelations of the different parts in

the entrepreneur complex—the entrepreneur being himself a part thereof—and a matter of the organization of the complex, there is a productivity which defies any attempt at distribution.

It remains true, however, that *the entrepreneur can readily tell how much he would if necessary pay, and how much he must pay,* and *this is all that,* in this aspect, *is necessary for the validity of the dosing argument.*

"But," Hobson says, "the 'dosing' illustration is vitiated by a more fundamental flaw. . . . . We may suppose that he [the laborer] is in full knowledge of the facts and has a full exercise of choice; as a consequence, he estimates that it just pays him to work five looms instead of four" (pp. 142, 143). Why say that the fifth loom pays him less or produces less or adds to his wage less than any other one loom out of the earlier four? "The fifth loom after it is added is found to be just as productive as any of the other four looms. The answer is plain. The fifth loom only just pays because its addition has injured his work with the other four looms." That is, each of the later stock is producing less than each of the earlier stock produced before, but any one item of the present stock produces now as much as any other one item produces now.

That all this is true may be, and must be, admitted; but here again, there is doubt whether the argument is to the purpose as disturbing the dosing method. Let it be assumed that, to the four looms, 500 in product was to be attributed, 125 for each loom; but that with the five looms only 600 of product is obtainable, 120 per loom. Surely it is not true that in this second case the first four looms are to be credited with a return of 125 each and the fifth loom with a return of only 100. Under the new situation all are producing equally. Hobson is certainly right here. But it is nevertheless true that the productivity of the fifth loom, 120, is achieved only on terms of reducing the productivity of each of the four looms from 125 to 120, with the result that the net advantage from having this fifth loom with its 120 of productivity is only 100; this 100 is, then, all that can at the outside be paid as the price of the value increase accruing to the whole situation by virtue of the hiring of the fifth loom.

The next objection, the third so called, is, in truth, not another objection, but merely another aspect of the first; as such, it must be accepted as tenable, but this only in view of the precise manner in which the issues in the discussion have defined themselves:

> Professor Marshall, in treating the marginal dose of labor in agriculture (e.g., the last hoeing applied to a field), admits that "the return to that last dose cannot be separated from the others," but, he adds, "we ascribe to it all that part of the produce which we believe would not have been produced if the farmer had decided against the extra hoeing" (Book IV, chap. iii, p. 144, par. 2).

Marshall's argument must be admitted to be unfortunate; to make the best case for it, it is necessary, Hobson, believes, to state the thing affirmatively rather than negatively, the question not of what would be forfeited by the loss of one item out of the existing stock, but of what would be gained by the addition of another item. As the expense computation is forward-looking so must also the return computation be forward-looking.

But Hobson, in condemning, like Wieser before him, Marshall's—as also later Clark's and Carver's—backward-looking, negative method of value imputation to productive agents, fails, like Wieser, to see that no ultimate conclusion is thereby established. Wieser had somehow deduced the tenability of the forward-looking addition method; Hobson infers the impossibility of any separate value imputation of any kind:

> Where it is essential to productivity that land, capital, and labor shall all co-operate, it is impossible to assign to any one of them a product based upon the supposition of a separate productivity. Similarly, where there exists a necessary organic quantitative relation between the factors, no separate product can be put down to any single dose of each (p. 147).

But that this is true of the concrete commodity product does not necessitate the conclusion that it is true of the value product; and Hobson himself appears to assert that the increase of product at the margin or under the margin is due to the capital or to the labor application, since no valuable use of land is actually employed.[18]

[18] As has already been argued, and as will later more fully appear,

But that entrepreneurs do actually bid not only for additional supplies of competitive business capital, entrepreneur capital, but also for different agents and instruments of productions—these all the while, however, reduced to terms of capital outlay, and so ranking under the common denominator computation of entrepreneur cost—must still be admitted; and this leaves the dosing principle good for all that, in the present connection, the rent-cost problem, it was ever supposed to be good for. The real difficulty with the dosing principle is in the attempt to apply it in terms of the traditional categories of productive factors. The tripartite division is altogether inadequate to the case.

But to acquiesce in the dosing principle as an entrepreneur method of computation is not of necessity to concur in the conclusion that all rents, or any particular class or subclass of land rents, must be excluded from price-determining entrepreneur costs; in truth, the dosing method is, in entrepreneur computations, serviceable with reference to expenses in general, or with reference to any particular direction of expense. Thus we are constrained to deny that "the net result of this argument is that the application of the law of rent to the intensive cultivation of a single factor must be rejected as fallacious," but we none the less agree that the argument is fallacious as used to show that any form of land rent is irrelevant to the process of price fixation.

THE VARIOUS RENTS IN THEIR RELATION TO VALUE

Hobson argues, as did earlier Say, and as does later Fetter, that although land and labor are commonly regarded as having concrete forms, we are prone to regard the payment for the use of capital as payment for the use of a money value of a certain volume. But Hobson insists that if any common law of price or of value is to be worked out, both land and labor must be subjected to the abstract-value

Hobson's position is in fact correct with regard to the value product; but the argument under consideration falls a good way short of proving this. However, in a paper published in the September, 1904, number of the *Journal of Political Economy*, Hobson has presented a much more searching and in many respects a satisfactory analysis of this question. See, later, chap. xxii, p. 476, note.

measurement as cost values, or capital must be conceived as concrete forms of wealth serviceable in production:

> The actuality of a science of industry as distinguished from a science of finance requires us to take the latter course, and to treat capital as consisting not in money but in concrete forms of wealth serviceable in production (p. 151).

That one and the same treatment must be accorded to all productive agents and instruments ought to be accepted as past doubt, and it is to be counted to the especial honor of Hobson and Clark that they are first among modern economists to accept and to emphasize this fact, and are still almost alone in this acceptance and emphasis. But in point of fact the uses of labor and the uses of land do attain a value statement as everyday, commonplace, cost-value items in the entrepreneur-cost computation. Hobson, indeed, has himself gone so far as to reduce these land *uses* to an abstract fund of productivity units. Other economists have attempted a similar form of funding for labor and capital, based, it may be assumed, upon the evident reduction of all of their productive services to the common denominator of market price.

But there need be no disappearance of these separate and concrete existences, through the mere fact that all arrive at the common denominator of exchange relations in market price. And the fact that the customs and legal institutions of modern society deny any capitalized value to the laborer, as distinguished from the daily putting-forth of his labor power, need cause no perturbation; the labor use expresses itself in value precisely as do land uses and capital-goods uses. And the land, in receiving not merely a rental value but a capitalized value, remains despite that fact none the less concrete. So there is at this point no especial occasion for Hobson to insist upon the concreteness of capital goods, and particularly no occasion for carrying this insistence so far as to call for the abandonment of the market-value expression of the capital goods and of their productive services. But this latter course is the one chosen, most unfortunately, by Hobson; thereby, as it seems, he is compelled to abandon the common "business valuation of all capital as a valuation based upon the rate of interest. . . . . No relation is possible between this capital and our other factors of production. We must deal with the concrete forms which are thus valued" (p. 152).

And, as it seems, he makes both unintelligible and impossible his earlier notion of land as an abstract fund of value-productive units.

Land and capital, Hobson urges, require no rent or interest for purposes of upkeep; there are indeed upkeep charges, but all charges of this sort are met before the net income can be computed or be capitalized into present worth. But it takes some wage to maintain labor in existence. "Thus it comes to pass that while the margin of land is no-rent land, the margin of capital no-interest capital, the margin of labor is (say) 15*s*. labor." But "this 15*s*. wage does not in any sense correspond to interest or rent. It is simply a wear-and-tear fund of labor, the expenditure necessary to replace the labor power given out in a day's work and to maintain the laboring population at their present numbers and at their present capacity. . . . . It is wages above 15*s*. that correspond to positive rent and interest:" and the fact that, unlike land, labor and capital have no sub-marginal representatives does not impair the setting; for there is a fund of capital safe to become actual if the rate of interest calls for it [but, one infers, not safe to relapse into non-existence if interest again falls], "while any rise of payment to the marginal 15*s*. labor will increase the supply of labor power, either by raising the population rate or by improving the efficiency of labor, or by both" (pp. 155, 156).[19]

[19] "Whether it be true or not that the prospect of obtaining interest is a necessary motive to induce the creation of capital, it may distinctly be affirmed that interest is not necessary to secure the economic maintenance of forms of capital that have been brought into existence" (p. 153). Not so; there is needed the same inducement to prevent deterioration of the land, or of the capital, or the slow consumption of either that was needed to induce the creation or the improvement. Upkeep is a new capitalization; if rent or interest only cover this charge, there is nothing left to overcome the abstinence protest against the postponed consumption involved in holding the wealth as instrumental or intermediate goods. But it is fairly to be inferred that all forms of positive upkeep either of land or of capital are reckoned by Hobson as within costs. But here again it must be noted that since the upkeep requirement applies to land equally with capital, there is with land the same opportunity for abstinence and the same elasticity

And now to the question, What payments for use of land, capital, labor, enter as elements into market price of goods? it is replied that—

the same reasoning which shows that differential rents of land need not enter price shows also that differential payments for capital and labor need not enter price. . . . . Just as rent of land need not form an element of cost or price in agricultural produce, some of which is raised on no-rent land, so interest need not figure in the cost or price of manufactured goods, some of which are produced by no-interest businesses, while similarly no cost of labor above the 15*s.* depreciation fund need enter into the price of commodities partly produced by marginal laborers (p. 157).

It might, therefore, it is urged, be true that price should be determined by the cost upon no-rent land, cultivated by farmers obtaining no interest from their capital, and paying only a bare subsistence wage to their laborers:

But normally the last and most expensive portion of supply which rules the supply price will not be produced under conditions which exclude all rent and profit. . . . . It will be more likely that the last portion of the supply will be produced partly on no-rent land, but paying an interest on capital and perhaps a wage far above 15*s.*, partly by tenant farmers paying rent but earning no interest on invested capital, partly by peasants paying rent or mortgage interest, but living on a bare subsistence wage. [And so] if the history of the most expensive portion of a wheat supply could be closely traced, it might well be found that some quarters of it were raised on no-rent land, others on no-profit capital, others on subsistence wages; but that an average quarter of this most expensive portion contained some element of rent or interest or higher wage, or all three. [And so we get as the determinant of price a cost] not necessarily the minimum of rent interest and wages, but the lowest average combination of the three. . . . . Differential expenses of

of supply, in kind if not in degree, as with capital. And from the point of view of the individual calculation, either is immediately consumable since either may by sale be turned into immediate cash.

As to the 15*s.* necessary upkeep for labor, it is to be said that whether or not it may apply as a long-time population doctrine, it is entirely irrelevant as a business—a financial—consideration to any entrepreneur producer. One can afford to deteriorate his laborers where he could not his slaves or his ox; his laborers are not *his*. And note that the hirer of any agent has not the slightest interest to ask how much of his payment is for rent or interest and how much for upkeep; the payment is in any case equally a hire and an expense.

production above this composite limit, whether they be rent, interest, or wages, will not enter into the market-price of the supply (pp. 158, 159).

Probably the fitting course for one who altogether fails to understand is to ask questions: What "last portion" is it which, being price-determining, yet divides into "parts" or "portions" raised under all possible forms of co-operation of productive agents, by "numbers of farmers working under widely different conditions, some in old, some in new countries, ... some quarters raised on no-rent land, others on no-profit capital, others on subsistence wages"? And even assuming that any portion of demand or of supply, or any possible pair of traders, could determine the price, what has the sort of composite presented,—if any such there could possibly be,—to do with price fixation? And if somewhere there were found a man working on good-for-nothing land, and with valueless appliances in the hands of laborers paid at precisely the cost of their keep, what warrant would there be for assuming that this man's cost would either fix or be the market price? Why, if his employees were exceptionally efficient men, but grossly wronged under some forced-gain relationship or contract should not this exceptional farmer be making an especially and obnoxiously high rate of profits? Or, on the other hand, is there anything, except that he has nothing to lose, to prevent his making serious losses? And why should we, as the seeming beginning and occasion of all our troubles, have started with the assumption that good-for-nothing, powerless, no-rent land is, for economic purposes, land at all, or that rickety, payless, valueless hay-rakes are capital at all merely by the fact of being in concrete guise and in the similitude of farm machinery? And is it true that "the 15*s.* wage does not in any sense correspond to interest or rent"? For is there not at any rate this much of correspondence, that, under competitive conditions, each productive agent gets recompensed in some approximation to its efficiency in the process of value production?

Or if it be answered that this determining cost and this determining unit or portion of the supply are not the cost or the supply of any one man or of any one place, whose then are they, and *where* are they? And if they need be of no one place, need they be of some one particular time, and why, or why not? And if they are some sort of

an average compounded of different marginal producers anywhere and everywhere, how compute supply as elastic through some composite-man's processes and choices? And of whose psychological processes could it be true that only 15*s.*-per-day labor would be computed as cost? That "the law of substitution has always to be taken into account" can rightly mean not that the actual rents and wages and interest are to be omitted from costs, but only that by so much as the cost expense in one or another of these directions is less, by so much must it be more in the others; excepting for differences in entrepreneurs all the different items of one supply would have the same cost.

And as with land and rent, so with labor and wages; that the better lands are more highly paid than the poorer, or that the best laborers receive higher wages than the poorest, has no significance for the question of costs; there is no reason to suppose that any grade of agents or instruments is better or worse paid than any other, in proportion to the efficiency rendered. The cheaper lands or the low-paid laborers are as dear at the price as the better. Inter-laborer rents, like land differentials, have no relevancy to the cost problem. If the 15*s.*-man's wages enter into price, so must the 20*s.*, that a man $\frac{4}{3}$ as efficient gets, enter into price, and this to the extent not of 15*s.* only, but for the full 20*s.* And as with the better lands so with the better laborers or the better entrepreneurs; the best, as easily as the poorest, may be nearest to the margin of alternative occupation; but not the outlay, were it less, nor any collectivist reckoning of some alternative concrete product, but the outlay as it is, has significance for the purposes of competitive cost.

CHAPTER XXII

DISTRIBUTION BY VALUE PRODUCTIVITY: CLARK

The central thesis of Professor Clark's *Distribution of Wealth*[1] is that the different distributive shares are the correlatives of productive efficiency, and that under static conditions and with frictionless competition these shares would be accurately correlative.[2] As corollaries from this

[1] John Bates Clark, *The Distribution of Wealth, a Theory of Wages, Interest and Profits,* New York, Macmillan, 1899.

[2] "It is the purpose of this work to show that the distribution of the income of society is controlled by a natural law, and that this law, if it worked without friction, would give to every agent of production the amount of wealth which that agent creates. However wages may be adjusted by bargains freely made between individual men, the rates of pay that result from such transactions tend, it is here claimed, to equal that part of the product of industry which is traceable to labor itself, and however interest may be adjusted by similarly free bargaining, it naturally tends to equal the fractional product that is traceable to capital."—*Ibid.,* Preface, p. i.

It is unnecessary to stop to discuss, or even to appraise, Clark's limitation of the subject-matter of the problem to concrete, material goods; e. g.:

"By wealth is meant those sources of human welfare which are material, transferable, and limited in quantity" (p. 1). "Outward material things that are appropriable and, in this specific way, useful, are economic goods" (p. 41). "The great income of all society—that which is to be distributed—really consists of concrete articles, all of some use" (p. 13). It is unnecessary also to discuss his consistent utilitarianism,—mostly by assumption or implication,—or his pronounced and unquestioning insistence upon "natural law" as a causal, directive, and compellative agency; e. g.:

"Is there a natural law according to which the income of society is divided into wages, interest, and profits? If so, what is this law? That is the problem which demands solution" (p. 1). "There is, in short, a deep-acting natural law at work amid the confusing struggles of the labor market" (p. 2). "Where natural laws have their way, the share of income that attaches to any productive function is gauged by the actual product of it" (p. 3). "If the law on which property is supposed to rest, the rule, 'to each what he creates,' actually works, etc." (p. 9). "For the present, be it noted that exchanges divide and subdivide industry; they range its forces into groups and subgroups, the functions of which are determined by natural law" (p. 20). "Dynamic changes are in another and broader sense natural. Nature herself is continually disturbing the régime of

position or as steps in the argument by which it is reached, the following propositions become of especial significance

natural prices but competition is trying to restore it" (p. 79), etc. And it is unnecessary to discuss therewith the adoption of the associated ethical view inclining to identify natural law with providential adjustment in such sort that optimism recommends itself as a scientific faith; it is fairly to be said that while all these are issues, they are not issues by which the general positions of the author's theory of distribution must stand or fall. And while in this connection it is only just to say that in many of these formulations, such as, "A social law governs the apportionment and if this law could work without friction, etc.," Clark means in the main by "social" and "natural," merely *static*, it is probably equally just to say that he often has in mind something very appreciably different, though he himself might be unable to say precisely what,—a mysterious, providential, intrinsic something, more or less personal and wise and beneficent, by which it comes about, among other things, that all these natural results are fair and righteous and especially calculated to justify the ways of God to man, at the same time with furnishing a deep scientific basis for an optimism which would otherwise and in another sense be hopeless.

But it is nevertheless to be said that this optimism, limitless in quantity and confirmed and radical in quality and often leading the writer to justify things which are least offensive when viewed apart from their moral quality, has yet no necessary part or share in the argument or in the conclusions of the book.

And further: However much dissent or question may later come to be expressed as to the fundamental thesis that the "income that attaches to any productive function is gauged by the actual product of it; . . . . to each agent a distinguishable share in production, and to each a corresponding reward, such is the natural law of distribution," it is no necessary part of the criticism that Clark believes that "more hangs upon the truth of it" than does really so hang. With the thesis once established he must still be indefinitely distant from justifying the present organization of society. It is clearly untrue that "the right of society to exist in its present form, and the probability that it will continue so to exist are at stake." One might concur in Clark's thesis and be yet the most radical of socialists. That rent is paid as the precise correlative of the productive efficiency of land has nothing to say as to the right of private ownership in land. Carver has made this clear in his review of the work under consideration; nothing remains to be said:

"The right of the present social order to exist depends upon the laws which govern not functional but personal distribution. Our only interest in functional distribution is due to the light which it throws on the vastly more important question of personal distribution. We need to be shown that the tendency of the present social order is to give to each individual producer the share which he individually creates, and no more."—T. N. Carver, "Clark's Distribution of Wealth," *Quarterly Journal of Economics*, Vol. XV, p. 578 (August, 1891).

But here again Clark's argument and conclusions are in no wise involved; the substance of the work is otherwhere.

as indicating, for present purposes, the trend of the theoretical analysis:

1. Capital is regarded not as concrete capital goods but as an abstract, homogeneous value fund.

2. For static purposes, land is assimilated to capital goods and funded with them into abstract capital, socially viewed.

3. Labor is also funded into value-productivity units.

4. Value expresses marginal utility, and is fixed and determined by marginal utility.

5. All factor rents or hires are equally included in costs and made of precisely similar relevancy to price; but these remunerations are rather value-derived than value-fixing,—this last, however, not quite definitely beyond misinterpretation.

6. The possibility, under the funding principle and from the group point of view, is asserted of isolating the separate productivity of units of capital and of units of labor.

7. Distributive shares are determined by the value-productive power of the final unit of the funded productive factor.

8. Society is viewed as an organism, and derivative concepts of group pain, group pleasure, group utility, group cost, etc., are adopted and emphasized as necessary to the argument.

9. *For dynamic purposes*—purposes of retrospect or of prophecy—the tripartite division of productive factors, in the sense of mechanical and technological categories, is made important.[3]

[3] Propositions (1), (2), and (3) should in this connection call for no further discussion, excepting possibly to the extent that in the consideration of the remaining propositions these earlier doctrines may be found explicitly or impliedly involved; nor, seemingly, need any proof by quotation or citation be adduced that the positions as above formulated are actually held.

With regard to proposition (4) also, when once it is established as actually held, neither criticism nor discussion would appear to be necessary for present purposes.

In the interests of space and as intimately associated with (4), proposition (8) will best come in here for such citation and quotation

Propositions (5), (6), and (7) present the issues with which the immediate discussion is chiefly concerned.

as may reasonably be called for, and for such discussion as the particular form of presentation may seem to demand:

"In every stage of economic evolution wealth consists of useful material things; but their utility is of the kind that we may call *specific*. Each part of the supply has some importance attaching to it. . . . . Outward material things that are appropriable and, in this specific way, useful, are economic goods.

"If an article is useful to one man, it is usually so to another, and is therefore in itself exchangeable" (p. 41). "If men do in fact use a number of units of consumers' goods, all of a kind, and if the specific utility of these goods diminishes as they get more and more of them, then what they will give for any one of them will be gauged by the specific utility of the last one. If these familiar premises of the modern theory of value correspond with the facts of life, the theory explains the prices of goods in a modern market" (p. 42).

"The primitive [isolated] economy . . . . cannot test final utilities in a market, for it has no exchanges. Can it not, then, test them at all, and does it not find it necessary to do so? We may easily see that it does this, and that the purpose is exactly like that for which organized society makes the same test. The principle of final utility belongs in the first division of a theory of economics and has to be assumed in the second division" (p. 43). "The law of final utility fixes the point at which such a producer will stop creating one product and begin making another. A modern laborer, with money in his pocket, is supposed to consult the law of final utility in making purchases and to spend each dime where, in view of the supply of different things on hand, it will do him the most good. . . . . While markets and prices are, therefore, modern phenomena, the study of which has no place in a division of the science devoted to universal truths, the law of final utility which directs the purchases that are made in a modern market also directs the production of the isolated man, and is a universal law of economics. . . . . In modern life these laws direct the social demand for different goods offered in the shops; but in primitive life they control the manner in which a man husbands his productive power and uses it where it will do him the most good. The law of final utility is common to both economies" (p. 44).

"The picture of an isolated man turning his own labor from making one thing, of which he now has a supply, to the making of a thing that has a higher final utility, illustrates a characteristic of modern life which is in danger of being overlooked. Through the laws of value, society, in its entirety, is doing exactly this. It is turning its collective energies from one direction to another, according to the law of final utility. Markets and values afford the mechanism for doing this. Think of society as an isolated being, turning its collective energy to the making of one thing till it has enough of it, and then making another, and you have the fundamental fact. . . . . Through the mechanism of a falling price, society is warned to turn its energies to the making of something else; and its whole procedure is nothing more nor less than doing what an isolated man would do, if

It would not, perhaps, be fair to ask whether Clark regards costs as determining value, or rather value as

he found his want of one commodity becoming satiated. If then we individualize society, if we make it to be in its entirety one isolated being, and if we give rein to that philosophy which treats a body of independent beings as one organism, we find it doing what a solitary man would do, under the influence of the law of diminishing utility. Putting a price on each article in a market is the act of the collective organism in estimating the importance to itself of each of its own products. . . . . Each man pursues his own interest; but as the outcome of his activity, society acts as a solitary man would act under the influence of the law of diminishing utility" (pp. 45, 46).

"Market value, then, is a social phenomenon; but the principle of final utility, by which values are fixed, is universal in its scope" (p. 47).

"By a law that Austrian studies have made familiar, the value of any article in this series of goods of one kind is fixed by the utility of the final one—final utility universally gauges value" (p. 163).

"If there are marginal laborers, in the sense that there are marginal quantities of wheat, cotton, iron, etc., then these final or marginal men are likewise in a strategic position; for their product sets the standard of every one's wages" (p. 90).

"If the man gives to an employer more than he gets from him, an inducement is offered to other employers to take him at a better rate of pay. Men in other occupations are in the same strategic position, and the wages of social labor equal the product of a composite final unit of it.

"How is this product to be measured? Take away one social unit of labor, and see what is lost by the withdrawal of it; or add one such unit and see what is gained by the addition. In either case it is possible to note the amount of product that is separately due to a unit of labor and to no other agent. Let us, then, withdraw what we have called a social unit of labor. This is a composite unit, consisting of some labor from every industrial group that the community contains. We will take away cultivators of the land, smiths, carpenters, weavers, etc., in carefully adjusted proportions, causing a final unit of labor to vanish from every specific industry" (p. 169).

It will be especially in place to note here that Professor Seligman's interpretation of the relation of utility to price offer and to value is substantially identical with that of Professor Clark.

Under the "General Law of Value" it is said: "Value is at bottom the expression of marginal utility. It follows that all prices must therefore be studied from the point of view of marginal utility; that is, of the power of marginal increments of supply to satisfy the marginal increments of demand. This is only another way of stating that the fundamental explanation of value is marginal efficiency or the capacity of marginal units to satisfy marginal wants." (Seligman, *Principles of Economics,* p. 262.) "The contribution or efficiency is the positive cause; the cost of production adjusts itself to this. . . . . The cost adjusts itself to the service" (p. 265).

"Cost of production is thus only a partial, and even then approxi-

determining costs; his analysis goes neither far nor deeply into the value problem. To be strictly relevant to his

mate, explanation of value; marginal efficiency is the universal and ultimate explanation" (p. 265).

"There is an abundance of silver below the surface that is not mined because it will not pay; if the marginal efficiency or value of silver should rise, these more expensive grades would at once be marketed, and the new marginal cost of production would adjust itself to the price. The price would not rise *because* the cost increased; but the higher price would be fixed at the higher cost because that would now be the new point of marginal efficiency" (p. 264).

Professor Seligman's work is, however, of especial interest in this connection by virtue of the thorough, consistent, and systematic manner in which he has carried this society-as-an-organism concept to its logical limits—whether of truth or of absurdity—as an interpretation of the entire body of economic doctrine. Such further criticism, then, as is pertinent to this particular aspect of Professor Clark's doctrinal position may well be merged with a discussion having primarily to do with Professor Seligman's more detailed exposition. The following is, for the most part, either reproduction or abridgment of the views of the present writer as elsewhere expressed in this connection. (See "Seligman, 'Social Value,'" *Journal of Political Economy*, March, 1906.)

It is with Seligman, as also with Clark, most difficult to determine the precise significance of such portions of the discussion as are devoted to the investigation and exposition of the categories of individual utility, individual marginal utility, individual demand, entrepreneur supply computations, entrepreneur cost, individual sacrifice, individual pleasure, individual pain cost, individual profits,—surplus, competitive, and differential, etc.; for in the main, all this individualistic discussion must, seemingly, be regarded as really and fundamentally beside the point, or, at the best, as only introductory to the point,—not precisely side issues, truly, and presumably not irrelevancies, but rather analogical, introductory, or superficial matter; for the heart of the doctrine, the realities of the objective business situation are sought otherwhere.

It is not, of course, to be taken as Seligman's intention to abandon any of his many formulations of the strictly individualistic sort; it still stands that "value is an estimate of the relative importance or utility of different quantities of goods" (p. 12); that "when we speak of the value of a commodity, we think not of the total utility of the quantity taken by itself, but of the marginal utility as compared with that of a definite quantity of other commodities" (p. 179).

But in view of the rich-man-poor-man complication, there must obviously be difficulty in finding someone to make the comparison; a pint of champagne sells for the same price as a sack of flour; are they therefore to have ascribed to them equal volumes of utility rather than merely an equality of command over purchasing power? Equal utility to whom? Who makes the comparison, or for whom is it made? It is evidently not enough to assert that "value is not merely the expression of utility in general, but of marginal utility"

discussion, the question,—substantially the same question, nevertheless,—should be formulated to ask whether distribu-

(p. 198). If values are really to be resolved into a common denominator of utility something further is waiting to be done.

The solution as offered runs:

"It is society as a whole which sets a value [market value] upon things. . . . . If an apple is worth twice as much as a nut, it is only that the group that uses apples and nuts finds, after comparing individual preferences, that the desire unsatisfied by the lack of an apple is twice as keen as that unsatisfied by the lack of the nut. Value, therefore, is not merely the expression of marginal utility; it is the expression of social marginal utility" (p. 180).

"Since value is a social conception depending on a comparison of diverse goods, and since this comparison is ordinarily made in society by their transfer from man to man, it is clear that the value with which exchange has to deal is exchange value" (p. 183).

"Value in exchange is nothing but the expression of its true value to the members of the social group, that is, of its marginal utility" (p. 183).

"Exchange power is based on the comparative estimates of direct social utility which gives to every owner of the commodity the indirect utility that fixes value in society" (p. 183).

This, then, is the first step in the solution—that the utility which underlies and explains value is not individual utility, but social utility. And we have, as we shall later see, in addition to this social-utility concept, concepts of social pleasure, social pain, social demand, social supply, social surplus, diminishing social utility, diminishing social return, a social-labor unit, a social-effort unit, social sacrifice, social cost; and finally, as the goal and summation of all this, social value, that is, market value. This will evidently bear looking into.

Some linguistic uses connected with collective nouns will offer a point of departure. When thought of merely as indicating an aggregate, a unit, the collective noun takes a singular verb; if regarded as a collection of units, it takes the plural verb. And so we say, "the committee was discharged," "the committee were unable to agree" (with one another); "was unable to agree" (with the conference committee); "the army were marching" or "was marching;" "the crew was" or "were exhausted." But one could hardly say, "the committee was unable to agree" (with one another); the agreeing has to be done by more than one person.

Now, in many cases, though the act or the situation asserted is really one of each individual by himself, there is no occasion for insisting upon this; no ambiguity or inaccuracy or misapprehension is involved in saying that "the battalion is eating its dinner;" it is a shorthand fashion of speech, but is perfectly intelligible; it is common enough to think of a battalion as a unit, and the act of dining is a simple one in which all join, and in which all comport themselves in pretty much the same way; from the point of view adopted, the interest proceeded upon, the purpose in hand, no importance attaches to the fundamental separateness of the activities, and to their entire lack either of psychical unity or of purposive co-operation; they are

tive shares are to be explained as derivative from value or as causes of value; is value, that is, the intermediate step

simply similar—roughly simultaneous—and are thought of in block. True, one man eats rapidly and another slowly, some little and others much, and a few sick ones not at all; but the expression serves, and implies its own limitations of accuracy.

And so of an army, when we say that "it marches," no doubt is even faintly suggested that each man does his own walking, works his own muscles, uses up his own tissue, and that presumably many are halt, while others limp, and some swear. But no one of these differences signifies for the purposes of the thought in mind; each man is separately getting ahead, moving along, like all the rest; and so we say, "the army is," etc.—serviceable speech, though in strictness inaccurate, were any perversity bent on misinterpreting it. But when it comes to asserting that the army is brushing its teeth, or has stubbed its toe, or has a stomach ache, there is obvious difficulty. These things are not done jointly, co-operatively, by aggregates, and will not bear thinking over into this form; the inaccuracy of the collective idiom is obtrusively manifest.

And so we may speak of public opinion, the preference, or habit, or custom, or convention, of society; and no harm need come of it, despite the fact that some men neither think nor choose in the manner implied, but have their own peculiar judgments or choices or wishes, and yet are members of society entitled to be included in any exact formulation; everyone knows that the thought really runs upon majorities of " 'most-everybodies;" that is, no harm need come of it, if only there were not people to take the notion of a "social mind" seriously, and to import into cases calling for accurate analysis, and to accept as sober fact, a mere figure of speech, or at best a loose analogy drawn from biological science. For to the biologists and the sociologists it is to be charged—or credited—that the society-as-an-organism formula has found its way into economic thought. And thus hereby a doctrine long since abandoned in economic reasonings is in the way of reappearing; for have we not need of normals and averages? Else our doctrine in getting accurate and actual will get difficult also. And so, by the aid of the sociologists, through the magic of the society-as-an-organism incantation, a resurrection miracle has lately been worked; we salute the average man.

One hesitates to approach the invidious task of assigning primacy in this new school of thought; for that there is a new school, and that it has come to include a passably generous membership—somewhat localized still—and that its doctrine means much for the good or evil of economic science, is the excuse, so far as there can be any, for the present protest. But it is nevertheless to be said that Professor Seligman is the first writer who has seriously undertaken to carry the doctrine to its logical conclusions; and thus it necessarily comes to be true that whatever is further said here is, in purpose and in practical bearing, impersonal, theoretical, and general in its reference, rather than primarily an examination of Professor Seligman's doctrine as such.

And yet one asks one's self why, if it is all thus easy—this magic word "social" making all things plain—if the heart of the mystery is

toward explaining distribution, or are the distributive shares to be taken as the intermediate step, and value the goal?

thus easily plucked out, why all this other talk of gross profits, necessary and minimum cost, individual cost, individual utility, marginal entrepreneurs, normal equilibria, true profits, competitive profits, and the like? Why, indeed, any talk at all? Everything will explain as a social resultant, if this passes as explanation.

In this doctrine of social cost, social sacrifice, and social value, one must look to find, as apparently one does find, a renunciation of all allegiance to outlay cost, and a return to the distinctly pain-cost and pleasure-balance terms of analysis:

"Cost of production is the measure of value; but it is not, as Ricardo thought, individual cost. Marginal utility determines value; but it is not, as Jevons thought, individual utility. Both cost and utility measure value, because . . . . marginal cost is always equal to marginal social utility" (p. 198).

"The sacrifice imposed upon society to secure anything is . . . . the exertion needed to replace it. . . . . Thus, when we speak of social cost, we really mean cost of production; and when we say that value is influenced by cost, we mean that value is influenced by cost of production. . . . . We think no longer of the sacrifice imposed upon any one individual, but only of the social sacrifice, or cost, embodied in the commodity; or, rather, the sacrifice, or cost, to the individual is the result and reflex of the sacrifice to the community" (p. 197).

"In society . . . . whatever the rate of exchange, it is only the social utility and the social cost of which the marginal degrees are equal. If a knife exchanges for a book, it is because the demand in the community as a whole is such that the marginal sacrifice to society of parting with a book is equal to the marginal pleasure of society in getting a knife. [Whereto goes the book, and whence comes the knife?] To put it more accurately, a knife will exchange for a book only because the sacrifice to society in making the knife, for which it receives in turn the pleasure of books, tends to equal the sacrifice of making the book, for which it receives in return the pleasure of knives (p. 197). . . . . To any individual the sacrifice may be less than the pleasure, but there will always be a marginal individual to whom pleasure and sacrifices are equal. The marginal pleasure in the aggregate tends to equal the marginal pain in the aggregate. The balance or equilibrium is between the pains and the pleasures of the sum of individuals. . . . . The real equilibrium is a social equilibrium. . . . . The real cost to any member of society which influences value is not the subjective cost to him" (p. 197).

Now, what does it really mean to say that the marginal pleasure *in the aggregate* equals the marginal pain in the aggregate? What is to be aggregated, even supposing the process to be a possible one? There is always a marginal person, it is said—one person "to whom pleasure and sacrifice are equal." But this man can have little to do with the case, for while there is such a man, "the real cost to any member of society which influences value is not the subjective cost to him;" and, in point of fact, there is, after all, no such man, for "it is only the social utility and the social cost of which the marginal

Or, again, is the fundamental problem one of value or is it one of distribution? Or, finally, are the two problems not really two but one?

degrees are equal;" we really think not "of the sacrifices imposed upon any one individual, but only of the social sacrifice or cost, embodied in the commodity; or rather the sacrifice or cost to the individual is the result and reflex of the sacrifice to the community."

Nevertheless, it is clear to Professor Seligman—and to us—that things have utility to individuals; and somehow it must be true that "the estimate put by the individual on one commodity as compared with another is the foundation of all value" (p. 179). "Value in exchange is nothing but the expression of its true value to the members of the social group, that is, of its marginal utility" (p. 183).

It is, indeed, true that by the possibility of exchange a commodity may come to have a greater indirect utility to its possessor than it has direct utility to him; but can it have any utility *to society* greater or less than it has to him? And in this computation is he, or is he not, a part of society? "Its indirect utility to me is the result of its direct utility to society." But what or who is this *society* whose direct utility is the cause of the indirect utility to the possessor? And how add together utilities to different individuals, "the members of the social group," so that a "direct marginal utility to society" may have existence?

It must be understood that with this latest school of value, as with its predecessors, the principle that demand and supply together fix price is, for whatever it is worth, freely accepted; but all the while with this difference, that demand, as conceived by this latest school, is really not the aggregate of the separate individual demands, each with its own particular psychology and its peculiar explanation: "The demand that tells is the aggregate demand depending on the social utility" (p. 20).

Likewise cost is essentially not a matter of individual outlay or sacrifice, working out into the expansion or contraction of supply, accordingly as individual preferences and profit may direct; cost is rather a transcendental thing:

"Since cost is a form of disutility, it follows that the real cost of importance in affecting value is social cost, and not individual cost. . . . . Value is the measure of sacrifice. In what sense? . . . . Evidently not of individual sacrifice. A street-sweeper may work harder than a factory hand, and yet the value of his services will be less. Value is a social conception; society puts its appraisal upon commodities. If value is a measure of sacrifice, and if value is a social estimate, value must be the measure of social sacrifice or cost. . . . . The sacrifice of each is compared with the needs of society as a whole. The standard is social, not material. It is easier to be a street-sweeper than a skilled factory hand. Society is more willing to spare the former than the latter, for to replace the one, society must give up more of its energy than to replace the other" (p. 193).

Note here that, precisely as when we were introductorily discussing individual demand and individual cost, cost was made a derivative

It is evident that Clark regards distribution as in part a process under which an aggregate of value is, as product, apportioned to aggregates or groups of producers; in part

of demand, so here, in the social computation, social marginal utility is presented as adequate and controlling for value; but meanwhile our real problem of how to get over from the individual reckoning to the social explanation obtains admirable and adequate recognition and expression:

"All value is the reflex of social marginal utility. We have now to study the nature of the social forces which operate to translate into actual prices on the market the feelings of the individuals that comprise the group" (p. 223).

If this problem is fairly solved, nothing will remain to be asked; but the difficulty and the regrettable fact of it all is that the transition over from the individual psychology to an alleged social psychology is nowhere seriously attempted, unless, indeed, the following may be taken to suffice for the purpose:

"Cost means socially necessary cost—not pains (or their money equivalent) taken, but pains saved. It is only because individual cost tends to adjust itself to the socially necessary cost that we can roughly speak of the price of anything depending on its cost of production" (p. 244).

"Socially necessary cost . . . . is the amount which the purchasers as a group are willing to give rather than make the article for themselves. If the individuals cannot reduce their cost, they will stop producing. If they reduce their cost below this point, the point itself will move" (p. 244). And so, then, it appears that individual cost does affect the quantum of the social cost. "Society will not be willing to give more, because what the producer can do, the rest of society can, if necessary, do. It is in this way that an equivalence is brought about between individual and social cost; and it is only because of this equivalence that cost of production may be said to influence value" (p. 244).

But in view of the fact that, by assumption, some individual producers will not be able "to reduce their costs and will stop producing," while, surely, other producers will so be able, what shall be made of the proposition that what some "producers can do, the rest of society can, if necessary, do"? Are all consumers to be accepted as like all the producers, despite the fact that the producers are themselves unlike?

Or perhaps the following should be cited upon the point:

"Cost of production does not mean individual cost. Value, as we know, is a social conception; the real cost of production which affects value is the socially necessary cost" (p. 243).

"The law of exchange may be equally well stated as the law of comparative costs. I may be so much more intelligent than my furnace man that I could save much coal by tending the furnace myself; yet I prefer to look after my business, and let him tend the furnace because it pays each of us to do so" (p. 226).

"The important point is not that a commodity costs the producer something, but that it saves the consumer something. It may save one consumer more than another, but its value depends on what it saves the

as a process under which the original group holding or imputation of value is subdivided among the the smaller and subsidiary process groups representative of the prog-

social group as a whole. This saving of social cost is what is meant by socially necessary cost. . . . . The cost to the individual producer will adjust itself to the socially necessary cost, that is, the amount which the purchasers as a group are willing to give rather than make the article for themselves" (p. 245).

Evidently, however, this reduces individual cost to social demand; thereby cost comes, not to fix price, but to be fixed by price; to make the determinant of value the question of what a commodity saves the social group is to abandon the cost for the utility side of the analysis. And thus, finding in cost no explanation of price, we are left to our further devices to explain that social *price* which lies behind individual *cost*.

Or the explanation for shutting out from consideration all individual peculiarities may be that they are assumed, for theoretical purposes, not to exist. Still, if this were the view adopted, we should, as has already been suggested, be precisely back to the reasoning by averages characteristic of an earlier, and possibly a better, time. But space fails for the discussion of this question; and we recall that our author has himself spoken decisively in condemnation of the economic man. There is also the further difficulty that, with this "average-man" analysis once adopted, there is necessarily an end to all talk of margins, social or other.

The truth is, however, that these differences between individuals are fully recognized, but are regarded as somehow merged and lost in the social utility, the social cost, the social demand, etc.; and yet the reasoning repudiates the economic man, declines any overt and systematic acceptance of the method of averages, and adheres resolutely and consistently to the marginal analysis.

Just as upon p. 228 it was declared that "a dollar is of more worth to a poor man than to a rich man—its marginal utility is greater," and that "the price of an old master or a mediaeval missal will often depend on the wealth of the purchaser;" but as it was nevertheless contended that "in the ordinary transactions of life, where we deal in masses of commodities . . . . this difference in the worth of money may be neglected," so now, in the discussion of the theory of interest, similar differences are likewise merged, the average method refused, and a cost-margin analysis—of the pain-cost type—presented:

"The only way in which capital can be formed is at bottom by saving, by waiting, by forbearing (p. 319). . . . . The problem is one of marginal forbearance, that is, of sacrifice at the margin where he must choose between consumption and saving. The richer a man is, the more remote is the margin where he will have to decide. The saving of a dollar means something very different to a rich man and to a day laborer" (p. 320).

"When, therefore, we say that interest is the result of forbearance, we really mean that interest is the result of marginal forbearance, or forbearance at the margin. . . . . This marginal point will indeed

ress of the commodity through its various stages from raw material to finished product; in part, also, as a process of partition of the subgroup holding of value between the individual members of the subgroup. But it is not at all so clear whether this threefold view of the total distribution process is purely logical and analytical—merely one way of looking at the case—or is rather intended as realistically descriptive of the objective facts, and as tracing the actual sequence and direction of the causal forces. But it is none the less important that an interpretation should be arrived at upon this point.

be a different one for the rich and the poor [but not different ratiowise], for the spendthrift and the miser, but this difference will affect the rate of interest as little as the relative wealth of the purchaser affects the price of wheat on the exchange. The value of wheat is the expression of its marginal utility to the wheat-using group; the interest on capital corresponds to the difference in the marginal estimates of present and future uses for the whole capital-using group. Value in the market is social value" (p. 398).

And all of this coheres logically with the doctrine of an earlier page:

"Cost of production is the measure of value; but it is not, as Ricardo thought, individual cost. Marginal utility determines value; but it is not, as Jevons thought, individual utility. Both cost and utility measure value, because . . . . marginal cost is always equal to marginal utility" (p. 198).

But it is more than possible that more than justifiable space and time have already been given to this social school of value. It remains, however, to query why, with all these social utilities, demands, supplies, costs, sacrifices, averages, and margins, we nowhere find any social rent or interest or wages. These, indeed, as categories of distribution, seem to be admittedly individualistic; though no good reason offers why, if demand is social, consumption may not equally be so. But if wages, rent, and interest are admitted and accepted as categories of distribution—as individualistic shares received under individual claims for value-producing service rendered—it must follow that profit, a surplus or residual of some sort or other, is also an individual category. And these incomes of rent, interest, and wages—distributive shares to the recipients—are obviously costs to the entrepreneur, and as such lead up to individual supply, and through supply to market value, so far, at least, as market value is affected by supply influences. What will the social-value school do with this situation? In urging that not individual, but only social, cost is relevant to market value, the school will be under obligations to work out, as factors of social cost, a scheme of social wages, social rents, and social interest, and, as surplus over social cost, a social profit.

In fact, however, it does not do this. For, as soon as we turn from the value problem to the separate treatment of the distributive shares, we find ourselves to have descended from the cloud-land mysteries of transcendental economics to the old and beaten paths of the traditional analysis.

If the wages and rent shares, as determined inside the subgroup, are fundamental and ultimate, the way is clear for an adequate and consistent entrepreneur-cost analysis, but all the while with this one difficulty, that we must forthwith set about to find what determined these rent and wages shares. Or if we can start with the market value as cause, each group share and subgroup imputation and infra-group partition will readily resolve its difficulties, the entrepreneur of course being taken to be present; but the difficulty will still remain of explaining that original value with which the explanation has improvidently set forth. And if, for the purpose, utility or marginal utility or subjective value be invoked, there is still no help, inasmuch as each of these assumes as fundamental to it the existence of a supply.

But how does Clark present the case and dispose of it? So far as, from discussions mainly introductory in character, a reply may be had to questions of this sort, it must be deduced from the following:

> There is a kind of distribution that does not fix the rate of wages and interest, but determines how much one industry, as a whole, including its laborers, its capitalists and its entrepreneurs, shall get, as compared with other industries. It determines whether one whole branch of business shall be more prosperous than another. This is an intermediate part of the general distributing operation, and it is accomplished by means of prices. When wheat, for example, is high in price, the farming industry is well paid, as compared with others; and when wheat is cheap, that industry is ill paid. If what we have in mind is the so-called "market price" of an article,—the immediate price of any given supply of an article,—this kind of value governs what we may call group distribution. If steel, for example, sells at a high rate, a large income goes to the group that produces it. This income distributes itself somewhere in the group; but how much of it laborers get, and how much capitalists and employers get, is a question that we do not now raise. This is determined by an ultimate distribution taking place within the groups. Group distribution is a preliminary division of this social income, and it deals with branches of industry in their entirety. The terms of this primary division of the social income depend on the prices of different kinds of goods. Farmers want wheat to be dear, as miners want ore to be dear, etc. Prices, then, fix the incomes of these groups.[4]

[4] Clark, *op. cit.*, p. 12.

The creation of such a general stock of commodities for use is a great synthesis, which goes on in a systematic way. One group of producers makes the article *A*, another group makes *B*, another *C*, etc. As *A* is sold, the sum that is paid for it is apportioned among the entire group that makes it; and as *B* is sold, the returns from this sale are divided in the same way, among all who have helped to make this article. The prices of completed articles thus fix the incomes of groups in their entirety. These groups are, in an equally exact way, divided into subgroups. . . . . If wool is dear, farmers thrive; and if the difference between the price of wool and the price of cloth is large, manufacturers thrive. It is market values that fix the incomes of subgroups as well as those of groups.

Neither of these price-adjusting operations, however, directly fixes wages and interest. This is the final and critical part of distribution. It takes place within the subgroups, and it constitutes the third and final division that has to be made. The portions that fall to farmers, manufacturers, etc., as such, have to be further subdivided; for a share must be paid to every laborer and to every capitalist. . . . .

This distribution goes on in three distinct stages. There are to be made a division, a subdivision, and a final subdivision of the social income. The first division fixes the income of industrial groups; the second fixes that of subgroups, and the final subdivision adjusts wages and interests within each of the innumerable subgroups in the system. The shares of the groups and those of the subgroups depend entirely on the prices of goods, and therefore the fixing of market values results in the adjustment of the terms of *group* distribution. . . . . Let *A'''* represent some one completed product, say bread; and let *A* represent raw material, the standing wheat of which it is made. *A'* may then represent the wheat as threshed. . . . . A'' may represent it as it is ground into flour. . . . . The difference between the price of *A'* and that of *A''* determines the income of the flouring industry, etc. *The income of each subgroup in the series, then, depends directly on prices.*

A philosophy that goes behind such market prices, however, brings us to what are called "natural" or "normal" prices. These are the values, expressed in terms of money, to which, in the long run, market values tend to conform. . . . .

A certain force that operates within the sphere of group distribution establishes the normal standards to which market values tend to conform. . . . . Market prices fix the incomes of the different groups, as such, and so control distribution in its early stages. . . . . A deeper force, and one that also acts in distribution, controls normal prices. Market prices are the cause of group distribution;

normal prices are the effect of a certain phenomenon of distribution. . . . . The movements that make prices "natural" are, in fact, efforts on the part of different men to get their natural shares of income.[5]

In view of the fact that it is said that "the social process of production includes exchange and distribution," and that "the theory of value and that of *group* [italics the present writer's] distribution are one and the same" (p. 24), the general trend of the doctrine of the foregoing might seem to be that the value field and the distribution field are one field, and that the two problems are but different aspects of one problem.

But on the whole, the position seems to be other than this, viz.:

1. That market value controls group distribution;
2. That the market value distributed to the group controls the values assigned to the subgroups;
3. That normal values control market values;
4. That (through fixing wage and interest incomes, and thereby fixing entrepreneur costs?) the distribution inside the group controls normal value.

Rearranging the quoted passages in such fashion as to express the imputed sequence, and recognizing and accepting the attendant dangers of misinterpretation, the doctrine would run as follows:

Market prices fix the incomes of the separate groups. . . . . The fixing of market values results in the terms of group distribution. . . . . Market prices fix the incomes of the different groups as such, and so control the distribution in its earlier stages. . . . . *The income of each subgroup in the series, then, depends directly on prices.*

"Natural" or "normal" prices . . . . are the values . . . . to which, in the long run, market values tend to conform.

A certain force that operates within the sphere of group distribution establishes the normal standards to which market values tend to conform. . . . . A deeper force, and one that also acts in distribution, controls normal prices. Market prices are the cause of group distribution. . . . . The adjustment of natural or normal

[5] Clark, *op. cit.*, pp. 14–16.

prices is a part of the distributive process. The movements that make prices "natural" are, in fact, efforts on the part of different men to get their natural shares of income.

Being again interpreted, this appears to say that normal value controls market value; that market value controls group and subgroup distribution; and that the distribution inside the subgroup controls the normal value; that is, that the ultimate term in the causal sequence is this infra-subgroup distribution process; everything else is derivative herefrom.

If, however, there is any seeming of circuity here, it is due rather to the sentence-juggling device than to the intrinsic thought; the difficulty is not that the explanation offered is circuitous, but that in last analysis no explanation is offered; but perhaps none should, at this stage of the argument, be required.

Notice, at any rate, that it is not said that the actual market value of any time is determined by the normal value, but only that, in the long run, market value is controlled by normal value; it may remain true, then—and it really must be true—that no matter what the trend of things or the necessary long-time adjustment of them may be, the market values of any particular time are due to the situation, the forces, and the adjustments of that particular time. To subscribe to some long-time control over the short-time value disturbs in no sense this principle; the short-time value of any particular sort of commodity remains, for its time, the determinant of the group and subgroup distribution of that time. For purposes, then, of any short-time analysis, it would be necessary that something be offered in the way of explanation of these short-time market values.

But to the logical validity of Clark's position nothing need have been offered in this regard; for his problem has been specifically chosen as the problem of static distribution; all, then, that is necessary is that he explain static value. The position on this point is as follows: Static values, as controlling group and subgroup distribution, are the result of the interest and wage apportionment worked out in the infra-group distribution process.

But it nevertheless appears to be true that the magnitude of the group *distribuendum* out of which, as a static problem, the specific wage and interest incomes are to be

apportioned, is controlled by static market values. The author's problem stands, then, if circuity is to be avoided, as an alternative problem—either (1) to explain the static value independently of the static distributive shares, or (2) to explain the distributive shares independently of the static values.

But it is forthwith to be added that something purporting to be an explanation of the distributive shares in this tertiary, infra-subgroup distribution is offered, which, in terms at least, makes no appeal to the support or aid of market values.

> The influence that brings production to this natural state is the effort of laborers and capitalists to seize any special gain that may be offered to them, by moving to any group in which the price of the product is high. This is clearly an operation in group distribution. Thus an influence that originates in distribution brings about a state of social production in which exchange values are normal (p. 18). Prices are at their natural level when labor and capital in one industry produce as much and get as much as they do in any other. Normal prices mean equalized wages and equalized interest. If the prices of wheat, wool, iron, lumber, etc., were such that no laborer and no capitalist could acquire an enlarged producing power by leaving the industry that creates one of these commodities, and betaking himself to one that creates another, the price of each of the commodities would be normal (p. 16). The proximate cause . . . . is a state of production; that ultimate influence that controls it is an action of the forces of distribution. . . . . Market value falls within the science of distribution. On the surface, it is current market prices that control the distribution which takes place among different groups or specific industries. These prices, however, are transient, and they fluctuate about certain more permanent standards. The tendency of group distribution to become normal, that is, to bring wages and interest to an approximate equality in different industries, draws prices toward the normal standard. . . . . What then, is left to be treated under the title, exchange? Only the actual passing of goods from hand to hand (p. 19).

That the ultimate determinants of value and of distribution must be of the general sort indicated is beyond question; all the facts must contain within themselves all the explanations, causally speaking, though perhaps not descriptively or interpretatively speaking. But, for this causal explanation to stand as complete, more must be offered than the mere disposition of men to seek the direction of

maximum pleasure or of minimum pain, or even the direction of maximum advantage or of minimum sacrifice; account must also be rendered of the needs and desires of men for consumption goods, on the one side,—on the other side, of human productive capacities and differentiations, and of the objective productive equipment—inclusive of opportunities, franchises, good-will, trade secrets, and purchasing power—in all its differentiations and adaptations and specializations and distributions.

But if, for any normal equilibrium value or for any temporary equilibrium value, an explanation of the sort offered is the kind of explanation for which we are in quest, and if it is of a character to suffice for the problem of distribution within the subgroup, and thereby to furnish the basis for the explanation of costs and market values, and thus to establish distribution as fundamental to value, why pursue this subject farther or any subject farther? Why need anything more be said for either the value problem or the distribution problem? All the causes are surely adequate to explain all the results. The difficulty, however, is that on this level of explanation both value and distributive shares are equally results, and results of the same order, and neither is—or can be—shown to be the intermediate cause of the other. And regarded from this point of view, the explanation of distributive shares, whether looked at as a problem of process or of causes, is neither a group nor a subgroup investigation; the individual choice of personal activity and of investment application is a choice wide as the whole field of capacity and opportunity.

But further: Accepting it, for the time being, as true that the ultimate adjustment, when reached, is an adjustment presenting equalized wages and equalized interest (property rentals?), as the result of the free play of choice between competing opportunities, and not at all stopping to wonder why and in what sense all wages can possibly become equal, it is still to be objected that these competing opportunities are themselves mainly the expression of an existing value situation; each individual's choice is made within this value situation and as directed by it. True it is that the entire situation of needs, capacities and possessions, adjustments, and distributions, may be taken as fundamentally directive and causal, but not so the individual choices made within the conditioning and directing

situation, nor, for that matter, all the choices, excepting with the tacit assumption of all the situation and in connection with it. The individual choice, or even the aggregate of choices, is far more result than cause, with the individual activity infinitesimal reacting as cause upon the entire situation.

And if any attempt is made, in the line of explanation, to go farther than an appeal to this huge and vague situation aggregate, and if definite and detailed explanation for anything be offered in terms of intermediate causes and sequences, there will forthwith come the abandonment of any further talk of value as the cause of any distributive shares, group or other, or of distributive shares as the causes of value; the investigation will be compelled to refer itself to actual business processes, to the machinery and methods and adjustments of a competitive society under entrepreneur organization and direction. Any investigation that approaches distribution, leaving value aside or treating it as a problem to be solved by some casual and taken-for-granted appeal to distributive shares as the basis of entrepreneur costs, is for practical purposes no solution at all.

But another solution may possibly be open, for whatever it is worth, a solution so readily deducible from the organic concept of society that it may well have seemed to dispense with any special labor of exposition:

Conceiving of Crusoe as a desiring fact as over against Crusoe as a producer pain-burdened in his processes of production, and setting him upon some assumed island of definite possibilities and limitations, we have seen it to be possible to deduce a fairly workable value doctrine for the isolated economy. If, then, society may be taken as having social needs and desires, and thereby a derivative social marginal utility and a social subjective worth and a social subjective value,—and if, over and against this demand term, there are social pains and abstinences and sacrifices adequate to function as cost terms in the value equation, no further assumptions appear to be called for; a complete account has been rendered of market value, for, fortunately, the environment does not also have to be obtained by this process of assumption.

And thus, with the market values all satisfactorily

explained, nothing remains to be done but to deduce the distributive shares.

Precisely so—but how deduce these? What problem of distribution is open? Distribution among whom? And under what basis of claim? Society did the producing and, by assumption, bore the pains thereof. Who, then, is this, or who are these now coming to demand that payment be had by some test of distinguishable, separable, and assignable contributions, productions, and deservings? If value fixation is a social fact,—costs, pains, sacrifices, pleasures, marginal utilities, and effective utilities, all social facts attaching to the appetitive or emotional psychology of the social organism,—how comes it that "there are three generic shares that are unlike in kind," and that

> the entire study of distribution is . . . . a study of *specific production;* is an analysis of the wealth-producing operation, and a tracing back to each of the three agencies that together bring wealth into existence of the part which it separately contributes to the joint result. To each agent a distinguishable share in production, and to each a corresponding reward—such is the natural law of distribution.[6]

That by Clark land and all other instrumental goods are reduced to one homogeneous fund of value units will at this point require neither illustration nor proof. Labor is similarly funded into a volume of homogeneous labor units. And, either as included within this labor fund or as basis of a distinct and separate fund, entrepreneur activity also must seemingly be subjected to the funding process and be reduced to a homogeneity of value units. Only so, in fact, is it possible to establish the central thesis of Clark's argument, the tendency, under normal conditions, of the remuneration of each and every unit in the fund to express, in precise equivalence, the productive contribution of that unit:

> There is before us the picture of social labor co-operating with social capital. Both are governed by the law of diminishing returns, and their earnings are fixed by the productivity of their final units.

[6] Clark, *op. cit.*, pp. 3, 4.

. . . . Wages conform to the final unit of social labor and interest to the product of the final increment of social capital.[7]

But "how may we measure labor, capital, and their products" so as to make certain whether this proportionality of remunerations to funded units everywhere holds? "We need, evidently, a universally usable measure of value."

"Provisionally, the 'doses' of capital are measured in terms of money; but it is necessary to know exactly what the money ultimately represents." [8] Is this ultimate underlying verity—this definitive fundamental fact in value—an objective labor homogeneity? Or is it a personal-sacrifice homogeneity? "If it means either of these two things, it is still necessary to find some way in which to express a measurement of labor or of sacrifice." And to Clark "it is clear that the [value] product of the capital cannot, in such connections as these, be the basis of the measurement of the capital," for this would be circular in reasoning: "If we say that whatever produces a unit of consumers' wealth is a unit of capital, we assert nothing by adding that, at any one time, all units of capital are equally productive." So it is only provisionally that the doses of capital are measured in terms of money; we must, it is said, go deeper than this:

A universal unit for measuring economic value is necessary, if the law of final productivity is to have scientific exactness. The entire study of wealth is, indeed, meaningless, unless there be a unit for measuring it. . . . . Ratios of exchange alone afford no answer to the economist's chief inquiries. The actual wealth of a community consists in heterogeneous things. If they are ever added together, it must be because there is some one element found in all of them and this element is absolutly measured. . . . . There is one element that is common to all the diverse things that appear in the inventory of social wealth. In every commodity there is a power of a certain kind which can be measured. . . . . There resides in each of them a certain amount of influence on human well-being. . . . . *Effective utility* is the name by which this potency of goods will here be designated. . . . . Effective utility is the basis of values.[9]

Effective utility is, then, the common denominator into which all values are to be resolved and by virtue of which

[7] Clark, *op. cit.*, p. 373.

[8] *Ibid.*, p. 374.

[9] *Ibid.*, pp. 375, 376.

each and all come to be rational, intelligible, and comparable. And this is in line with the doctrine, already noted, that "the principle of final utility by which values are fixed, is universal in its scope." [10]

"Final utility universally gauges values." [11]

That is to say, effective utility and final utility are essentially the same. True, "amounts of wealth are usually stated in money;" but the coins are not really the measure; they merely express power over the things that afford service: "They will buy goods or set men to working. There resides in each one of them a certain amount of influence on human well-being;" they control effective utility. "Effective utility is the name by which this potency of goods will here be designated." [12]

But admittedly some things have utility not because they give us pleasure but because they shield us from pain; and Clark insists that this pain-avoiding quality is the characteristic and essential and ultimate fact in all effective utility; the marginal-utility analysis does not go deeply enough, or, rather, it does not bring out quite adequately the important aspect, the sacrifice aspect, of things of service:

> Give to a man a barrel of flour and you make him by so much better off. . . . . If you had not given him the flour, he would have got it by some sacrifice; and what you have done is, in effect, to save him from sacrifice. This effect measures the value of the flour.[13] Take away a barrel of flour that the man now has, estimate the real detriment that he suffers, and you measure the effective utility in another way.[14]

Is this subjective worth? It looks like it; but if it is assumed that the loss *must* be made up by labor rather than submitted to directly or, perhaps, shifted to something else, the doctrine diverges from the Austrian analysis, and —still more—diverges from the truth. And if it be admitted that the loss has not, of necessity, to be made good, or that, if made good, it may be at the cost of some substituted

[10] *Ibid.*, p. 47.
[11] *Ibid.*, p. 163.
[12] *Ibid.*, p. 376.
[13] *Ibid.*, p. 376.
[14] *Ibid.*, p. 377.

service, we have nothing but subjective worth, the cost aspect of utility, "the importance attached to a good as the indispensable condition, etc.," a purely personal category and an unrelated feeling magnitude. Clark continues:

> He must [?] have food, and will get it by sacrifice of some kind. He may not fully replace the sacrifice of the flour; for he may live on maize, and in that case the utility of the barrel of flour is gauged by the cost of the maize and the unsatisfied want of a better quality [or quantity?] of food.

But later upon the same page the labor-necessity view is fully adopted:

> The final measure in the case is one of pain; for the ultimate injury that is done to a man by depriving him of any one means of pleasure, resolves itself into putting him under the necessity of enduring a certain amount of personal sacrifice in the effort to secure something that will effectually replace it.[15]

But in any case, we have arived at nothing more or other than the old difficulty with regard to either marginal utility or subjective worth; as a purely personal experience, unrelatable to the experience of any other person, and, as absolute feeling magnitude only most vaguely—as marginal item of a series—related to any other experience of the same individual, it perhaps does not greatly matter whether the sacrifice be asserted to refer to the loss of utility merely or to the labor pain of replacement. If market value is to be resolved into a homogeneous fund of utility units, there are clearly some further steps to be taken, and these of a passably difficult sort. That these steps are, indeed, impossible of accomplishment, earlier chapters have sufficiently emphasized. It remains, then, to present, with the minimum of comment, Clark's proposed method:

> It is this process . . . . of determining how important it is to have one thing by ascertaining how much it will cost to get a very different thing, that reveals one special significance of a study of effective utility. Men pursue happiness in the generic, and the form in which it may come is secondary. The measurement of well-being, thus regarded in the abstract, is an occult but dominant fact in exchanges. A man may have a monopoly of one means of promoting happiness, yet he cannot set his own price for his wares. That is fixed by the cost entailed on the community by the effort

[15] Clark, *op. cit.*, p. 377.

to secure, by any means whatever, an equal quantity of happiness. Effective utility . . . . is measured by society as a whole; and in this lies the significance of the phrase, "measure of effective *social* utility." . . . . The price of a thing gauges its importance, not to one man, but to all men, as organically related to each other. The efficient serving power of an article varies in the case of different individual users, but to society as a whole it is constant. . . . . Into the mysteries of distinctly social pyschology, therefore, the measuring process that gauges value must be traced. Essentially simple in nature is the operation, simpler even than the act of the man who decides how important a horse is to himself by seeing how long he must work to get a boat and a tennis outfit.

It is now necessary to give definiteness of meaning to the word *social*. There is such a thing as a unit of social improvement or detriment. It happens, however, that the detriment is more available for measuring purposes than is the improvement; and so the final unit of value is the sacrifice entailed by a quantity of distinctly social labor. Society, in short, sets value upon a thing by ascertaining how much work is necessary to replace it or to get an equivalent for it.[16]

It would seem, then, that in order to measure a unit of social utility, we must first make precise the notion of a unit of "distinctly social labor;" what, then, is this?

Doubtless utility exists for each man and sacrifice exists for each man; but because each man can make these estimates for himself, does it safely follow that society can do the same for itself? And if we know how the individual man does it, shall we also know how society does it? So it seems:

It may be assumed that whole articles are made by individual workers. As such goods leave the makers' hands day after day, in a continuous supply, they seek purchasers. No one man will take many, but society will take them all. . . . . That each class of goods is *made in great numbers by one man* and *consumed singly by many men,* is the essential thing to be noted.

It is the users of an article that can best gauge the well-being that it gives them, and they make the estimate continually. Shall I buy this article? . . . . Is this article or some other of equal cost the more desirable? . . . . If each man could measure the usefulness of an article by the effort that it costs him to get it, and if he could attain a fixed unit of effort, he could state the utility of a

[16] *Ibid.*, p. 378.

number of articles in a sum total. Similarly, if all society acts in reality as one man, it makes such measurements of all commodities, and the trouble arising from the fact that there are many measurers disappears. A market secures this result, for society acts as an individual unit—like an individual buyer.[17]

And similarly for the sacrifice,—which, we recall, has thus far been presented as a better measure of the effective utility than is the marginal utility itself, although this is not to be taken as in any sense an abandonment of the notion that all value resolves into and is nothing but effective utility; sacrifice is somehow a better measure of utility than is utility itself; indeed, how can utility serve as its own measure? And it needs measure, while, it seems, sacrifice does not, or perhaps is more easily measured:

Work . . . . consists of concrete acts of men; and these are as unlike in themselves as are the miscellaneous articles that are to be measured by them. Can we make one sum of the labor involved in cutting wood, in playing violins, in setting type, etc.? Adding the unlike acts that constitute social labor is, it appears, as difficult as adding the products that constitute social wealth. There is need of a pervasive element in the actions, and one that can be measured. Such an element can be found; for, as utility is common to all commodities, so personal sacrifice is common to all varieties of labor. There is service rendered to man, on the one hand, and there is burden imposed upon him, on the other. Social self-service—the act of mankind ministering to its own needs—constitutes the whole economic process. . . . . A point is to be found at which social costs of production offset and measure social gains. . . . . We can . . . . estimate pleasure in terms of pain.[18]

An isolated worker is the user of his own products, and he naturally works each day till it does not pay to work longer. Additional product might be gained by prolonging the toil, but the advantage of having it could not compensate for the sacrifices of making it. . . . . The man that we are studying is a society by himself; he makes things and he alone uses them. . . . . Of a society regarded as a unit the same is true. It produces for itself, and the burden of its final labor measures the utility of its final products, which is the same as the effective utility of any of its products created by the same expenditure of working time. Take away the articles that the society gains by the labor of a morning hour, the

[17] Clark, *op. cit.*, p. 380. [18] *Ibid.*, p. 381.

necessary food, clothing and shelter that it absolutely must have, and to make good the loss it will divert the work performed at the approach of evening, which would otherwise have produced the final luxuries on its list of goods. . . . . The things otherwise produced by that final labor will be the ones really lost, and their utility is measured by the burden entailed in the creating of them. . . . . Everything that is produced by one hour of social labor, whether that labor be performed early in the day or late, possesses an effective social utility that equals the absolute utility of the final complement of goods consumed; and this, again, is counterpoised and measured by the sacrifice which all society undergoes in the labor of its final hour. . . . . Periods of labor are equal in *effective* disutility, and this makes it possible to use the labor of any period of a given length as a unit for measuring values. . . . . In the subjective valuations of society, as an organic whole, the product of two hours' labor is always worth just twice as much as is the product of one. Mere labor time is an accurate gauge of the values of different complements of goods.[19]

But a group of goods to serve as a social unit of consumption is one thing, and the separate items made by different individual men may be another; is "mere labor time . . . . also an adequate gauge of the values of the different articles that enter into the complement"? Here the answer appears to be that the utility of what I sell is measured by the pain of society in producing what I get in exchange for what I sell: "The pain that all other men suffer in making products for him represents the cost to them of what they get from him. . . . . Price is, then, an indication of the *social cost of acquisition* of different commodities." [20]

Recalling now that each unit of labor commands under normal conditions precisely the same remuneration as every other unit, we become interested to know how much labor of any given individual constitutes a labor unit. Evidently, laborers are not paid the same per-diem wage, but only the same wage per labor unit:

[19] *Ibid.*, pp. 383–89, *passim.*

[20] *Ibid.*, p. 391.

A laborer of high grade embodies in himself more units of labor than does an inferior one.[21]

The final unit of labor is the sacrifice entailed by a quantity of distinctly social labor.[22]

A social unit of labor . . . . is a composite unit consisting of some labor from every industrial group that the community contains.[23]

A minute would be a larger fraction of one man's day than of another's. It is accurate enough for our purpose, however, to say that the social labor is made up of a fixed fraction of a day's labor of every individual.[24]

Evidently it does not matter what precise quantity of this social labor is taken as the unit of measurement; but take now the case of a man who makes and upon the market sells a commodity:

A commodity is actually measured for value on the basis of the social service that it renders. . . . . All society, in the end, incurs a marginal sacrifice that measures the value. . . . . The individual labor which made the commodity is the economic equivalent of the social labor that is induced by it and that measures its value.[25]

But how does a man actually go to work to exercise this inducing power over the social labor? Evidently he sells his product upon the market:

If money is used in the transactions, and if the price of *W* and that of *X* are equal, it is because the last unit of supply of each commodity, as it is made over to the miniature society for consumption, imparts to society as a whole a uniform addition to its enjoyments. . . . . Price is, then, an indication of the *social cost of acquisition* of different commodities.[26]

Thus are we able to know how much of each man's labor is necessary to constitute a unit of labor; and then we know that these amounts of labor will be equally paid—these funded equal units; and how do we know this? By the fact that in selling them upon the market, they will draw out equal quantities of social labor. But this means that the products sell for the same money price, and that the two quantities of labor are equal quantities by the mere fact of the equal market values of their products. And yet Clark has only a few pages back insisted that it will not do,

[21] Clark, *op. cit.*, p. 63. [23] *Ibid.*, p. 170. [25] *Ibid.*, p. 397.
[22] *Ibid.*, p. 378. [24] *Ibid.*, p. 396. [26] *Ibid.*, p. 391.

in good logic, to make "the product . . . . the basis of measurement. If we say that whatever produces a unit of consumers' wealth is a unit of capital, we assert nothing by adding that, at any one time, all units of capital are equally paid." [27]

We have now to recall that in Clark's view this resolution of market value into some sort of underlying and controlling and determining homogeneity is absolutely essential to the funding of capital goods and of labor into value units, and likewise essential to the proof that in each fund the compensations tend to be—and normally are—the same for all of the units. That is to say, Clark rests the specific-productivity theory of distribution upon two bases, (1) that market values can be reduced to an ultimate homogeneity in terms of effective-utility units, it being for this purpose that the social-organism concept is invoked for service; (2) that all productive agents, on the one hand, and all productive instruments, on the other hand, are likewise subjected to the funding process, in such fashion that equal value productivity may be ascribed to the individual units of each fund, and this without appeal to the quantum of value productivity as determining or defining the unit.

It is, indeed, possible that Clark has admitted here more than the necessities of the argument require; it is conceivable that neither of these intermediate steps is essential to the conclusion; it may be that the specific productivity of the productive factors may be worked out, and distributive shares be found to be the precise correlatives and equivalents of specific productivity, and all this without appeal to any sort of homogeneity underlying and determining market values, and without any manner of recourse to the funding devices proposed. How, indeed, disprove it?

And it is also forthwith to be admitted that no proof has yet been offered—or can later be adduced—that society is not an organism; but it is equally certain that no proof has yet been anywhere adduced that it is; and it is worth noting that the sociologists themselves have long since mostly

[27] *Ibid.*, p. 374.

abandoned the doctrine. But none the less may the doctrine be true, and fertile of more truth; this, however, is sheer matter of faith; and, as all propositions purely of faith are, it is at once unproved, unprovable, and undisprovable. And so likewise it may be true that the social organism has methods of funding labor and of funding capital that we wot not of; and—possibly enough—these capital and labor value funds—organically valued—are not derivative from the valuations organically placed upon the products. We can deny no part of this in any sense of thinking ourselves able to prove its falsity; to prove that water babies do not exist, we must, Kingsley tells us, do more than not see any water babies existing, we must see a water baby not existing. We can, then, do no more than to put in issue and to criticize the evidence or arguments, if any have been offered, in support of the position taken. Any criticism made or yet to be made must mostly confine itself to questioning the *logical* legitimacy of this establishing of fundamental propositions purely by faith, and to a scrutiny of the logical tenability of the relations asserted or assumed between these dubiously authorized propositions.

But if, even faith-wise, these factor funds can be established upon any other than the repudiated basis that "whatever produces a unit of consumers' wealth is a unit of capital," the explanation—if explanation it is—must apparently run substantially as follows:

Just as "effective utility . . . . is measured by society as a whole," and as "the measurement of well-being, thus regarded in the abstract, is an occult but dominant fact in exchanges," and as "in this lies the significance of the phrase 'measure of effective utility,' . . . . it was upon the word 'social' that emphasis was laid;" precisely so, by some occult social-organism process, do we get an appraisal and a funding of capital goods and of labor,—a funding non-derivative from those volumes of value product ascribed and imputed to these productive factors,—and all this, also, in such fashion that both a mystical, occult, and marvelous parallelism and a precise proportionality are discoverable between the value of the funded unit and the value of its product.

But even if this social-organism method of getting products and productive factors into abstract funds be

abandoned as, on the one hand, unproved, and as, on the other hand, unserviceable for its purpose unless logically abused, the productivity theory of distribution need not, be it repeated, thereby become untenable. It seems, indeed, that Clark has overestimated or wrongly located the difficulties of his problem; and it must be remembered that it is primarily this problem, and not Clark's solution of the problem, that is of interest to our investigation. Take it to be established, if we may, that market values will not reduce to pain jelly or to utility jelly, whether by the social-organism concept or by any other method; the case of the productivity theory of distribution is not forthwith to be declared hopeless, if only it be true either, (1) that the funding expedient is not essential, or (2) that without any appeal to the hypothetical psychology of the social organism, the market values of products and of factors may be made homogeneous on some sort of workable basis; and it need not matter whether this other basis be something distinct from pain cost in the getting or from well-being significance in the using.

It is, in any event, worthy of remark that the market values of products and the market values of factors are actually and patently homogeneous under the simple, everyday, and commonplace guise of market price, a homogeneity, that is to say, in terms of the money fact, a conventional standard admirably adapted, as expressive of homogeneous, undifferentiated purchasing power, for meeting all the requirements of this greatly desired homogeneity. What, in fact, can capital as an abstract fund possibly be, if it be anything other than a market-value fund?

But, even so, we are immediately driven back upon the problem of how to make use of this homogeneity in such wise as to help forward the problem in hand, which is, in part, precisely this of how to explain these very market values or hires upon these productive factors. For it must still remain true, as Clark has so well pointed out, that neither capital units nor labor units, no matter in what manner or how well funded, can logically be asserted to possess equal value productivity and so to be equally rewarded in value compensations, if all the while the units are explained and established as such, only by the fact that they produce equal values or get equal compensations.

We seem compelled, then, to adventure the problem under its other statement, how to explain the remunerations attributed by the market to the different, specific, concrete factors and items employed and remunerated under the productive process? Is it possible to regard the remunerations as either normally or actually the precise equivalent of the productive contribution? How determine this separate productivity for comparison with the remuneration? Is any method of isolation of factors possible? Or is all that can be said merely that the remuneration is the market value of the value-productivity contribution rather than the precise equivalent of the value contribution? To this aspect of the problem, which, after all, seems to be treated by Clark, we must now direct attention.[28]

But precisely what is our problem? It is clear that we are not now interested in any issue as to whether cost causes value or value causes cost, or as to whether distributive shares are better regarded as primary or as secondary; no denial is suggested that all productive instruments and agents are hired in view of the value products to be derived from them; so far as this, at least, the value-productivity theory of distribution must be genially accepted; nor is there question that the amount of value in the joint product of the factors is the equivalent, the

[28] "*The specific productivity of labor fixes wages*—that is the thesis to be supported in this volume" (p. 47).

"We have said that the *specific* productivity of labor fixes wages; and this means that pay conforms to the amount of product that is specifically imputable to any one unit of labor in a working force. This implies that the products of the different units are equal. In like manner, the *specific* productivity of capital fixes interest. The earnings of a dollar are what the dollar creates; and this implies that in any one fund of capital, as it is described in terms of money, the products of all the different dollars are equal" (p. 49).

"A laborer's income may seem to come to him from another man; but in essence it is still the response that nature makes to his own labor—it is his own virtual product" (p. 53).

"The income of each subgroup is now the value, not of a completed article, but of the one particular utility that it imparted to that article" (p. 54).

"Paying interest is [sometimes?] buying the product of capital as paying wages is buying the product of labor. The power of capital to create product is, then, the basis of interest" (p. 135).

"As value depends on final utility, so shares in distribution depend on final productivity" (p. 208).

source, and the intermediate determinant of the aggregate compensations distributed to these factors, it mattering not at all for present purposes how this total value to be distributed was caused or fixed; nor are we tempted to deny that each of these distributed compensations falls out in some general and approximate proportionality with the value increase contributed; but rather are we concerned to determine whether any separate and specific productivity of the different co-operating productive factors can be so isolated and distinguished that, actually or logically, the compensation may be declared to be the precise equivalent of the productivity contribution. That is to say, what is the meaning and what the warrant of the assertion that out of the distribution of a joint product the different productive agents receive the precise equivalent of the value which they have contributed? Is it true that this precise productivity can be arrived at otherwise than by sheer reference and appeal to what they get?

This is, in truth, our old problem of imputation, the problem already considered at length in an earlier chapter, how to distribute between the different co-operating factors not only all the value product which, if not so co-operating, they might have produced, but, together with this, that increment or surplus of product which accrues as the very result, as it was the very purpose, of their co-operation.

Assume that in isolated uses, or in other combinations, each of four productive facts, e. g., land, machines, wage-earners, and entrepreneur, could command 3 of recompense, and that when the four are brought together, their aggregate product is not 12 but 13; what distributive principle shall be invoked to apportion this surplus of 1? If the first of Clark's principles of imputation be accepted, namely, that "the amount that is taken from the crop when one cultivator is withdrawn from the force, measures the effective productivity of every laborer of like personal capacity," [29] this subtraction method will lead us to impute to each co-operating factor a specific productivity of 4,—and this despite the obvious fact that the joint product is not 16 but 13.

Clark's second principle of imputation he does not himself recognize to be a second, but only the repetition of the

[29] Clark, *op. cit.*, p. 161.

first: "A similar test might have been made merely by adding a unit of labor, instead of taking one away." But if this principle be accepted we shall come into precisely the reverse difficulty. For if the proportions of factors in the original complex were the correct proportions—if, for the entrepreneur, the combination was the best combination—no increase in any one factor alone could take place without its per-item productivity suffering. It follows that the method of "adding a unit of labor instead of taking one away" would distribute a product somewhat smaller than the actual product.

But when it is known what any particular entrepreneur will, at the maximum, bid for the item in question to be used as part of his production complex, under his own direction, is it safe to attribute all of the increase in product to the new item? Is not this increase due rather to the mere "togetherness" of all of the co-operating facts? And is it not certain that other entrepreneurs in different circumstances and of different abilities must have different maximum bids? And which one out of all these different productivity relationships gauges the specific productivity of the item in question? And does the market hire necessarily or probably exhaust all the value significance of the item to the successful bidder? And are not the cases where this is even approximately true confined to those productive factors which are present in stocks?

Substantially the same difficulties exist for all attempts at the isolation of productive factors; zones of indifference, in the sense of zones of isolation, are not to be found. If labor could somewhere be found supplied with no tools, or with valueless tools, and working upon valueless land, this would be labor suffering in compensation by reason of a limitation of product due to inadequacy of equipment. Where "the worn tool, the rickety engine, the unseaworthy ship . . . . is at the point of abandonment, the labor that uses it creates only wages;" this is true, but not full wages. It is therefore not true that "the amount of this product corresponds with and expresses the rate of general wages," [30] and would not be true even if all laborers were alike in their relations either to equipment or to entrepreneurs.

Nor—adapted to Clark's proposition—is there any zone

[30] Clark, *op. cit.*, p. 97.

of indifference, or place of isolation, for the last or marginal worker employed by any entrepreneur:

> It is this most sterile of the fields, openings, or opportunities for labor that we describe graphically as an outermost zone within which men produce only their wages. This is the zone of indifference from an employer's point of view, because, if he sets men working within this area, he must give them all that they produce as wages.[31]

But, at the most, he needs do this only upon the assumption that he is the marginal employer, and upon the added assumptions, also, that the employees are all alike and that there is nothing peculiar in them or in him or in his land or other capital so that another employer may not push him to his highest possible bid. And even upon these assumptions, there is no reason for supposing that even the last laborer is hired at precisely no gain; the employer may well have some unexhausted powers of supervision still left in him. And so, "if one employer offers to them less than by their productive powers [working for and under him] they are worth [to him]" there is no sufficient warrant for the belief that "another will offer more, provided competition is perfectly free and efficient."

It is, then, a most dubious doctrine that the last laborer hired by the marginal employer is hired at no gain. Is there any good reason for supposing the extended supervision of the employer to be non-productive? Why, then, does he exercise it? And if it be urged that because of limited command of capital some of the supervising abilities of the employer must, in any case, run to waste, it is to be replied that this argument recurs to an assumed peculiarity in the employer's situation, and so far abandons the attempt to explain the wages as reflecting the isolated, objective, value-producing power of the laborer. For note that the isolated and objective productivity in question is not to be established even upon the assumption that the production takes place upon marginal land only, or at the marginal powers of land, and with the cooperation of only marginal capital or the marginal powers of capital; it must also be assumed that the production is marginal in its relation to that marginal entrepreneur, and to the supervisory productive powers of that entrepreneur,

[31] Clark, *op. cit.*, p. 110.

who can pay least for the labor and who, hiring it, pays at the same time all that he can.

And now, assuming even this case of utmost payment—a payment leaving no least residue of rent or interest or personal compensation for the comfort of the employer—where all the produced increment goes to the laborers and goes as their distinct and unquestioned value productivity, it becomes so much the clearer that the wage outlays of the marginal employer are not fixed by him, but fixed for him; he has no share in the results as fixed, except to the extent that as one item in the demand schedule, his demand has prevented that still lower wage which would have attended the throwing of these laborers over to the employment of some still less efficient and still weaker entrepreneur. But as in such case the wages must admittedly have been lower under this otherwise excluded employer, it follows that to our marginal employer, or to his entire productive complex as a unit, there must be ascribed some part of that productivity which Clark's analysis imputes to the laborer alone.[32]

[32] Clark himself recognizes the importance of the productive complex—recognizes, that is,—as perhaps in view of his abstract-capital concept he logically must,—that each added dose of capital takes the form not of a quantum of machinery, or of land, or of cars, or of rails, etc., but of a complex or complement of co-operating factors, all applied under the guise of an item or dose of productive outlay, a unit sum of capital expense; and this is admirable, only that it is assumed that, in concrete manifestation, this capital outlay must take the form and guise of material capital goods, rather than be applied *in toto* or in varying fractions to all lines of gainful expenditure, inclusive of labor, insurance, advertising, taxes, and what not:

"Here, for instance, is a new locomotive. It has not been secured . . . . to take the place of one worn out, but is an additional engine, made necessary by an enlarged traffic. Is it a final increment of capital? . . . . It would be uneconomical to combine one poor engine with an equipment of good cars, good rails, etc. This complementarity of producers' goods must always be considered. . . . . The quality of the new engine is determined by that of the roadbed, the rails, the bridges, the cars, etc., with which it is used" (p. 248).

But note that this really denies any distinguishable and specific productivity in the separate items of capital goods; and note also that this same argument applies in principle to all combinations of capital with labor, or of capital goods with other capital goods, or of labor with other labor.

"The competition for capital . . . . is an all-around struggle to get concrete things that *are about to be*. The capital of society has no existence till it is in the shape in which *entrepreneurs* use it. Till it is raw materials and tools for the manufacturer, merchandise for the

But we have now to notice a still more important and still more disastrous error in this method of analysis:

> The product that can be attributed to this second increment of labor is, of course, not all that it creates *by the aid of the capital that the earlier division of workers has surrendered to it;* it is only what its presence adds to the product previously created.[33]

This is crucial; in point of fact, the new labor does not get all the increase; the conditions of distribution are disturbed to the advantage of the capital; wages are suffering not merely from the fact of a diminishing production increment, but also from the fact that out of this situation every unit of capital is deriving an increased income; that is to say, wages are suffering not only on the production side but on the distribution side.

The fundamental error in all analysis of this sort—and the later economics is full of it—is traceable to the assumption that the marginal-utility analysis for the individual man can safely be carried over to society as a whole, and also that the method of computation supposedly valid for consumption goods can safely be applied to production goods disposed of under entrepreneur bidding:

> There is a commercial principle which causes the final or marginal part of the supply to be strategic in its action on the value of the whole group. The value of the whole crop . . . . conforms to that of the marginal bushel. If there are marginal laborers, in the sense in which there are marginal quantities of wheat, cotton, iron, etc., then the final or marginal men are likewise in a strategic position; for their products set the standard of everyone's wages. . . . . The last increment in the supply of any commodity fixes the general price of it.[34]

retailer, vehicles for the carrier, etc., capital has no existence at all. . . . . Bidding for capital, then, is bidding for something which . . . . will consist mainly in a change of quality of working implements" (p. 259).

"The final increment of the capital of this railroad corporation is, in reality, a difference between two kinds of plants. . . . . One of these is the railroad as it stands. . . . . The other is the road built and equipped as it would have been if the resources had been one degree less" (p. 251). All this presents the social concept of capital rather than the competitive.

[33] Clark, *op. cit.*, p. 176.

[34] *Ibid.*, p. 90.

The difficulties are thus several in the way of this method of solution of the distributive-imputation problem:

1. With complementary production goods, no separate and specific significance, like that attached to consumption goods, can be ascribed to any one item.

2. Changes in the relative supplies of co-operating goods work changes in the relative significance of all the different classes of the co-operating goods.

(Propositions (1) and (2) would hold either in a Crusoe or in a competitive economy.)

3. In the competitive economy all possibility of ascription of a single productive significance to any productive item disappears; the entrepreneurs being different in equipment and in degrees and kinds of skill, each item has as many different productive potentialities as there are different productive complexes. There can, therefore, be no one degree of productivity assignable as the specific productivity of any particular item; and there is no warrant for supposing that the hire paid by the successfully bidding entrepreneur coincides with even his own appraisal of the prospective increased efficiency of his productive complex. The successful bidder pays at the minimum what someone else will pay; at the maximum, all that he can afford to pay; but that he is the successful bidder does not imply that he actually pays this maximum.

4. Even were productive factors always present in stocks rather than—as generally—in concretely differing items, an entire competitive society would have no way of adding one marginal item of an increasing stock to a fixed and stable volume of complementary stocks; even the individual does not commonly proceed in this way, but rather, as he enlarges his business unit, enlarges it in several directions at once. In competitive society, stocks and classes of production goods do not take one after another each its separate turn in the process of increase.[35]

[35] The precise relation of the marginal analysis to the specific value-productivity issue will be brought out in clearer definition by an account of a recent controversy between Professor Carver and Mr. J. B. Hobson: Hobson, "Marginal Units in the Theory of Distribution," *Journal of Political Economy*, September, 1904; Carver, "The Marginal Theory of Distribution," *Journal of Political Economy*, March, 1905; and Hobson, "The Marginal Theory of Distribution," *Journal of Political Economy*, September, 1905.

In the preceding chapter some account was given of Hobson's

repudiation of the "dosing" method of analysis and of its purported bearing upon the relations of land rent to cost; and the opinion was there expressed that Hobson's criticism, as formulated in his "Distribution," falls appreciably short of seriously damaging the doctrine.

In his later contribution to the discussion he adopts, as we shall see, a dosing analysis of his own, but attacks with great force and cogency the notion that under any dosing analysis, properly applied, is it possible to isolate and measure the separate productivity of any one of the different productive factors in the production process. Meanwhile, and especially after the reply of Professor Carver, other interesting issues are introduced, some of them possibly not strictly germane to the original question. Clark's doctrine is necessarily involved, though Clark himself takes no part in the discussion.

Hobson denies that any entrepreneur, e. g., a farmer, deciding to employ a fifth laborer, can properly regard the resulting increase of product as representing or expressing the value productivity of this fifth man:

1. The work of this fifth man, being by assumption just like that of the other men, is equally productive, and is paid for at precisely the same rate, because of this precise equality in productivity; if actually there is less than five-fourths of the old product, it is in part because the employment of the fifth man has lowered the value effectiveness of each of the other men.

2. If the employer's managerial capacity leaves him yet able gainfully to supervise another—a fifth—man, it must follow that a share of the increase in product is to be attributed to the utilization of a fraction of managerial ability which hitherto had run to waste.

3. The doses applied are really not labor doses; one does not make an increase in the labor solely, but an increase partly in labor, partly in capital, partly in land; the dose is a land-labor-capital composite, and the increase in product is an increase which, if separately attributable to anything in the dose sort, must be imputed to this composite dose.

Hobson also argues—perhaps unfortunately, at all events, unnecessarily—that if the employer's payment were really the full equivalent of the productivity of the marginal man—if this marginal productivity were actually ascertainable—and if the productivity theorists were correct in asserting that this marginal productivity determines the wages and expresses and measures the value productivity of the wage-paid labor, it would thereupon follow, inasmuch as the other men are equally productive and equally paid, all getting precisely what they produce, that there could be no gain in the case for the entrepreneur. Hobson holds that it is precisely because the entrepreneur gets a forced gain, something which, morally, does not belong to him, that he gets a profit; and that Clark is justified in his view, that under the complete equilibrium of perfect competition, in "normal equilibrium," all entrepreneur profit would disappear; but that there is, on the other hand, nothing in the competitive trend to bring about this equilibrium situation; and that even were it to be established, the benefit of it would accrue not to wage-earners exclusively, but in part or entirely to consumers.

Carver joins issue upon this question of profit; and taking profits to indicate what is left over "after the other shares are paid," he rightly proceeds to infer that competition can never cancel all entre-

preneur remunerations; and he undertakes a detailed analysis to show that the entrepreneur, in employing more and more men, must finally come upon a man marginal for the purposes of gain—as, indeed, he must; that what the entrepreneur can barely offer for this marginal man is thereby established to be what this marginal man produces; that the earlier men, as they get no more, are equally clearly to be regarded as producing no more; that the excess in product from the earlier men over what they receive is really not their product at all, but is economically [and morally?] the product of him who gets it. Seemingly also, as with Clark, he gets it because he produced it, and is known to have produced it because he gets it.

Now if one could know precisely the sense in which Hobson here uses the term "profit," something could be done, were it worth while for our purposes, toward an award of judgment upon the issue as joined. Certainly Carver is right upon the profit issue, as he interprets *profit*. Certainly also Hobson is wrong in asserting that where, with four laborers, there is a product of 500, and with five laborers a product of only 100 more, "the competition of employers, driving down profits, will raise the wages to 120 . . . . if we assume . . . . [that] the competition of employers is as full and free as that of the laborers."

On the other hand, Hobson is right in his view that a *combination* of laborers *might* command approximately the whole 600 as wages,—if the employer must take the five laborers or none.

But, by the way, Clark, with his definition of *profit*, is also right in insisting that under the perfect competition of a static situation all profit would be canceled, since profit, as he uses the word, connotes merely that gain which is due to non-static conditions, or to incomplete competition, or to both.

But such is not the issue that at present concerns us; and such was not the issue which it was in Hobson's purpose to present. Nor, accurately speaking, does the question whether the work of the fifth man is of equal productivity with that of the others, greatly concern us; for what does the question really mean? Does it mean that it is as important to the entrepreneur to have one man more to go with the four as it was to have a fourth man to go with three? The question as thus stated answers itself, and there is no other question. There is no absolute productivity in this case or in any other case; there is only productivity relative to the entrepreneur and to his situation. Hobson rightly insists that it is not separate; nor is it intrinsic, or independent, or substantive; like all forms of utility or of service, it is a relation pure and simple. With a different entrepreneur it would be a different thing, another relation; with changes in this entrepreneur's situation or need, the significance of the instrument becomes a new and a different significance, simply because it is a mere relation. Productivity can be such only in the sense of a contribution toward value creation under the particular terms and relations of the situation as it presents itself. The hire does not express the value-productivity contribution, but only the market value of this contribution.

Hobson's substantial repetition of Clark's view that the dose is never one of labor alone, or of land, or of capital goods alone, but is

rather a land-labor-capital composite, a unit only in the sense of a unit complex, goes in one direction somewhat overfar, and in another direction not quite far enough. For surely with his last dollar or last thousand dollars of expense, the entrepreneur may hire nothing but labor or nothing but land, or nothing but capital goods; but as surely, he may hire two of them or all three of them together. Nor is it true that there is, under any one situation or at any one time, one best technological combination for each and all entrepreneurs; the different entrepreneurs being different in degree and kind of ability and of equipment, there is, in truth, never any one situation, but only various situations. One entrepreneur will apply his last dose of expense in one way, another in another, and these different ways may none of them be of the "composite" sort, or they may all be of this sort.

But, as we have seen, the truth is not far away; the dose with each entrepreneur is a dose of outlay, a dose of purchasing power, a dose of competitive entrepreneur capital. Nowhere in economic theory more seriously perhaps than here has the traditional threefold classification of productive factors exerted its influence to perplex and complicate and vitiate.

It must be recognized here that, for the purposes of this problem, Clark's notion of abstract capital has led him to the enunciation of what is substantially the truth. Without at all concurring in the dictum that "the idea that different parts of a product can be created by an entrepreneur at greater or less advantage to himself is fallacious,"—this notion seeming to cut away from under Clark's feet the only valuable and true thing in his entire marginal-productivity analysis,—the central idea in the following must command entire approval: "To him it makes no difference whether he hires one agent or another or the two together since he gets the same result for the same outlay in all cases" (p. 365).

CHAPTER XXIII

THE LAWS OF RETURN

To have established in economic theory, on the one hand, the distinction between long-time and short-time influences or, on the other hand, the distinction between the static and the dynamic in value problems is, irrespective of other and possibly greater grounds of obligation, to have placed the science under no small burden of debt. These are, however, really distinct services; for though, at first impression, they appear to rank as merely different formulations of the same principle of distinction, this is seemingly neither a sympathetic nor a fair interpretation of either.

Marshall's long-time reckoning points rather to such normal or static equilibria as are either reached or always in process of being reached within one general and established situation of fundamental conditions; the short-time reckoning allows for the minor perturbations and rearrangements which yet do not imply movements or tendencies in the direction of radical, permanent, or fundamental change. Clark's even more important recognition of dynamic forces in economic life points, on the other hand, to radical and permanent modifications in the ultimate determinants of value—changes in those greater and ultimately directive forces which have been here somewhat awkwardly denominated situation facts, as the basis of situation costs.

It is, however, obvious, that the two lines of distinction are prone to coalesce, and that long-run influences and dynamic influences, while sufficiently distinct at the extreme, shade off into each other in intermediate cases.

The long-run price is a normal price, a static equilibrium price as distinguished from those actual and unstable prices likely to obtain at any particular moment. That there

take place a merging of actual price into normal price requires the assumption both of a static society and of a long-run period. Nevertheless, the long-run computation is essentially one of an ideal, static, equilibrium price, the normal price, and is a concept far from new in the science. But up to the time of Clark, the distinction between fundamental change and temporary flux had been only vaguely felt and loosely formulated.[1]

But, as has already been urged, that the distinction between long-time and short-time influences is recognized as valid and illuminating, does not deny the cost relevancy of all those influences whose effect is believed to be transitory; the distinction rightly employed points merely to the temporary nature of these costs, to the probability or the certainty that they will later be greater or smaller. It is, indeed, a strange doctrine that admits a cost as temporary only upon the assumption that it is permanent. The distinction really points the way to an investigation of the influences lying behind costs, and to the level of costs which it is the trend of these influences to establish. Mere seasonal and climatic changes, droughts and crop failures, pestilences, famines, whims and flurries of fashion, stand as static influences which render the long-time computation

[1] "Clearly there is the necessity in economic reasoning of regarding man as the subject and central point in economic science; his environment as his opportunity; his industrial product as his remuneration; his economic activity as his attempt to produce and distribute this produce along the lines of least resistance (sacrifice). Normal price is to be conceived as the line of least resistance not only for the buyers and sellers directly engaged, but also for the producers in other employments searching for those lines of activity affording the highest remunerations. Market prices are found to fluctuate in either direction about these normal or ideal prices and cannot, in the competitive adjustment of sacrifice, long or widely depart therefrom. In short, the normal price is that price at which no producer can, to his own thinking, better employ himself in some other line of production. Prices generally would stand at their normal, if no producer or consumer could, to his own thinking, advantageously change his manner of economic action. But like the ocean, market values have no rest. Prices ripple and wave above or below their ideal level, as desires and appetites, opportunities and abilities, slowly or rapidly change in force."—Davenport, *op. cit.*, sec. 91.

safer for purposes of understanding the larger laws of price. According to Marshall, "the value of a thing in the long run tends to measure its cost of production"; not precisely that the value of anything tends to be fixed or governed by its cost of production: "we might as reasonably dispute whether it is the upper or the lower blade of a pair of scissors that cuts a piece of paper;" but, "*as a general rule,* the shorter the period which we are considering, the greater must be the share of our attention which we give to the influence of demand on value; and the longer the period, the more important will be the influence of cost of production on value":[2] all of which must be recognized as valid, since, as we have seen, cost in one industry resolves itself mostly into the demands of other industries; only in the long run can these opportunity-cost influences make themselves adequately felt.[3]

That, as men acquire larger knowledge, strength, and technical skill, they become more effective producers of

[2] Marshall, *op. cit.*, pp. 428, 429.

[3] Perhaps this is as good a time as any other for working out some of the detail according to which these short-time influences affect the long-time levels of things, and are finally absorbed into the long-time placidity. What results must commonly follow some price rise in the product of a particular line of industry, this rise taking place, it may be assumed, through a change in the habits of consumption?

There must first take place, in the short-time adjustment, an intensified utilization of all productive appliances in that industry, a recourse to some of the inferior powers of all the lands and of all the other productive agents therein employed, and at the same time an emphasized call upon other industries for instruments, labor, and materials.

But no very great increase could be brought about in the value of those productive agents existing in the large supplies implied by the mere fact of their being common to several different industries; the larger effect would be felt by those agents having, for the time being at least, an employment solely in the particular industry in question.

But this "monopoly" advantage would not work itself out fully; there are in the case important items of friction. Let it be assumed that these monopoly agents are competitively rented by owners to producers; competition could hardly be so swift or so effective as, with rising prices of product, fully to express the advantages in the rising prices of the intermediate goods, thereby assessing these goods as

wealth; that, with larger and larger supplies of any consumable good, there must go a smaller importance attaching to each successive unit of supply; that, upon any given area of land, successive increments of product are obtainable only on terms of increasing difficulty per unit of product; that, in many lines of production, the greater business has, in point of economies of production, the advantage over the smaller business—are propositions no one of which is markedly economic or technical in import, or of a nature to present overserious difficulty of comprehension, or of a character to offer especial temptations to controversy.

Not precisely so, however, for the same propositions as, after subjection to the necessities of economic analysis, reinterpretation for the purposes of economic investigation, and reformulation for the purposes of economic doctrine, they present themselves transformed and rearranged into the well-known "economic laws of return."

Superficially, though not thereby incorrectly, regarded, the ordinary formulations of the law of diminishing return may be distributed under three heads: (1) A law of falling

higher costs of production. To begin with, the machines could not be easily moved or sold, and competing producers could not step into possession of these monopoly appliances in their associated setting. In fact, the advantages do not attach to any monopoly agent separately and in isolation, but to appliances as members of a distinct producing group, with a pronounced interdependency between its various constituent members. Thus the problem of imputation within the group is, at least for the short-time adjustment, incapable of solution; practically speaking, the gains would appear as enhanced profits of management; but this is crude in theory.

And were the entrepreneur himself the owner of the different agents, the difficulty would be precisely the same difficulty; he could not ascribe to any one agent the productive advantages enjoyed by the group. The monopoly goods might be—would be—essential to the situation, but so, also, would the situation as a whole be essential; and the entrepreneur's own abilities in their relation to the rest of the situation would be equally essential. He could not expediently rent or sell the monopoly agents; they would not be practically mobile; therefore no alternative application would be possible whereby to apportion their shares in the group product. The problem of complementarity is present in an aggravated form; the product is simply and irreducibly a group product.

utility; (2) a law of falling product by weight and tale, a diminishing productivity in terms of concrete, objective, physical measures; (3) a law of falling value productivity.

1. The first formulation asserts that with successive increases in the size of the productive complex, the return in utility falls short of proportional increase,—obviously a direct corollary from the law of satiation, if not, indeed, a mere repetition of it; thus a law of unquestionable validity for the purposes of the individual reckoning, and indirectly of significance for problems of Crusoe valuation; but equally clearly, a law only vaguely and only average-wise applicable to group-utility computations; and, in any case, a law relevant to market value only through the individual comparison of competing utilities.

It is, however, here to be noted that, were all the different agents and instruments of production keeping abreast in rapidity of increase, this fact of falling utility could have no necessary bearing upon exchange relations. But equally for one agent or for all agents taken collectively, the law of diminishing utility, of falling significance with relation to need, must hold, since it holds for all products, unless, indeed, it is offset by the fact of increasing productivity by weight and tale.

2. The law of falling volume of concrete product, relatively to the enlarging productive complex, has evidently little significance for purposes of any individual competitive reckoning, otherwise than as the weight-and-tale aspect of the case transforms itself into a value-return outcome. And here, also, if all agents were manifesting the same rapidity of increase, it must follow, as will later more fully appear, that neither as volume nor as value need any law of diminishing return obtain.

3. The third rendering of the law, as one of diminishing value return, is the only formulation having direct significance for any purposes of the competitive reckoning; and in this regard, also, it will later appear that no matter how clearly manifest the utility fall may conceivably be, there is

no possibility in industry of a generally falling value return. So, upon the assumption of equality in the rates of increase among productive agents, there is possible neither a diminishing weight-and-tale productivity nor a diminishing value productivity.

Malthus and his successors long since made it clear enough that, looked at solely from the point of view of the land situation, the prospects of the human race are not encouraging. Increasing numbers of human beings must find the food problem progressively a more serious problem; overcrowded land is the same thing as poor land; a larger and larger share of human energies must, then, with expanding population be applied to the solution of the food problem. The law of diminishing return for land is a fundamental fact in human affairs, a fixed, opaque, and brutal fact, full of bad omens and sad prophecies.

And more than this; it is evident that but for this law of diminishing return there could be no possibility of land shortage, or of that inevitable derivative of land shortage, rent. Thus, as with increasing population, there falls out, per capita, a smaller product to divide, there must also go to the landlords a larger and larger proportion of the more and more tragically inadequate total. The social classes disinherited of land are doomed to a double and compounded pressure of adversity; this law of diminishing return smites them with both edges of its sword.

But the optimists also have their innings. All this would be true, other things remaining the same. But other things are not to remain the same; for if there is a law of diminishing return, there is also, it is said, a law of increasing return. If, with relative land famine, a larger share of the productive energies at human disposal must be applied to the land, it will also be true that, with improving methods and processes in manufactures, we can spare for the land a larger share of our productive energies. Who knows that progress in one

direction may not more than make good the deficit in the other direction?

And not this alone; progress is possible and is probable, not only in the technique of non-agricultural production, but also in agricultural production itself. Progress of this very sort has indeed been rapid even without the increasing pressure of need. For what has been the meaning of the redistributions of population especially characterizing the last two centuries? The urban population has far outstripped in rapidity of increase the agricultural population. The growth of the small city as against the country, and of the great city as against the small city is one of the most obtrusive facts of modern life; the new and agricultural countries like America and Australia, equally with the older countries, manifest these population redistributions; and on the other hand, in point of the degree of the tendency, the thickly populated countries of Europe fall not at all behind the sparsely and newly settled countries. City growth is general in the modern world.

Why is it? It is fruitless to search for the fundamental explanation in the improvement of industrial processes. Only such men can work in manufacturing as can be spared from the processes of food production. As long as the food product from one man's labor sufficed for the food requirement of only one man, the entire population was compelled to occupy itself with agriculture; when now one man's labor will feed three men, two-thirds of the population may be urban. So also, the development of transportation serves for the most part to explain, not why so large a proportion of the population is now agricultural, but only the distribution of the non-agricultural population. To the extent solely that transportation has opened up more land or better grades of land to agricultural uses, or is itself to be ranked as one of the processes of agricultural production, is transportation responsible for the growth of non-agricultural employment. And precisely here it should be remarked that to the extent

that, in the production of implements and appliances, manufacturing is itself an agricultural process, to precisely this extent industrial improvement must have aided the relative growth of the urban population.

Improving transportation, then, so far as it is not at the same time to be regarded as improving agriculture, has had its effect, not in emphasizing the growth of urban as against agricultural population, but in fostering the growth of the small city as against the village and of the great city as against the small city.

Looked at from a more distinctly technological point of view, this truth would read that transportation has fostered the giant industry as over against many small competing units.

Malthus in his formulation of the law of diminishing return for land was very plainly proceeding from a purely social and general point of view, rather than from the point of view of the distinct and independent and competitive interest. That the law of increasing return, conceived as summing up the optimistic offsets in the social outlook, is equally a non-competitive formulation is equally clear.

But, after all, what part, if any, of all this raw material of optimism is, accurately speaking, embraced within the economic law of increasing return? So far, all the "returns" suggested have sounded in terms of social service —of group or race utility, of quantum of productivity by measure of concrete item product, a purely weight-and-tale standard and basis of computation. And it is unquestionable that, for certain purposes and from certain points of view, this interpretation of the laws of return is not merely a possible one, but is the sole interpretation either relevant or possible. But it is equally beyond question that, for certain other points of view and for certain other computations, measures of utility return at the one extreme and of value return at the other extreme are much more to

the point. For most purposes in the competitive reckoning only laws of value return can have significance.

But does the law of increasing return, accurately formulated, have exclusive reference to such industrial effects as are due to the development of the human factor in production, whether in physical efficiency, in native mental power, in zeal and persistency of effort, in scientific knowledge, in control of technological methods and appliances, or, finally, in the advantages and methods of "team play" as exhibited in higher forms of organization? That is to say, does the law merely affirm that the better the producer the larger the aggregate social product, precisely as in the Malthusian reasoning it is asserted that the less adequate in quantity or quality the land the smaller the return to human activity applied to the land?

But, so interpreted, the law of increasing return applies, equally with the law of diminishing return, to agriculture; and the law of diminishing return applies, equally with increasing return, to manufacturing. Agriculture benefits by good appliances, by good transportation, and by zeal and care and intelligence in supervision and in organization; manufacturing suffers by every inadequacy of equipment.

Or does the law of increasing return assert that somehow, as manufacturing in the aggregate comes to employ more men (or more capital?), it makes more than proportionate increase in its weight-and-tale productivity? So understood—and irrespective of the effect of concentration into larger and larger productive units—there is only so much in the doctrine as may be implied through the division and specialization of employment between industries; and here again, the principle applies unequally to different manufacturing industries, and while perhaps applying more noticeably to manufactures as a whole than to agriculture as a whole, applies to some branches of agriculture in higher degree than to some branches of manufacture.

Or does the law in question assert that, with organization into larger production units, there results an increase in the weight-and-tale productivity of manufacturing industries in the aggregate? Here again, the advocates of *la grande culture* in England or among the bonanza farmers of the Northwest would insist that the law is also in degree an agricultural law.[4]

Or is the law to the effect that, *among competing units of production,* the relatively large competitor has the relatively large weight-and-tale product?

Or does the law run that among competing producers the relatively large units get better results in value product in proportion to the *value outlays* of production?

And if by chance the law be interpreted in this competitive and value sense, is it to be taken to compare the average entrepreneur costs and average value productivity of different units of production, or rather only their *marginal* value costs and their *marginal* value productivity?

And this leads us to the question whether the law is framed as primarily of service in the determination of comparative profits and thereby as explaining the trend

[4] Carver makes the following especially illuminating observation: "Confusion has sometimes resulted from a failure to distinguish the law of diminishing return from a somewhat similar law relating to the comparative economy of large- and small-scale production. It is, for example, sometimes stated that manufacturing is carried on under the law of increasing return, because a large factory can be run more economically and turn out product at a lower cost, than can a small one. But this is quite different from saying that a large factory can be run more economically than a small one on a given piece of land, or that it would not be necessary to use more land in connection with a large factory than with a small one of the same kind. . . . . Among the various questions on which the manager of such a unit has to determine are the two following: (1) What is the best proportion in which to combine the various factors; (2) What is the best size for the whole business unit? The law of diminishing return has to do with only the former of these questions. That is to say, it relates to the varying productivity of an industrial unit when the factors are combined in varying proportions. [Concrete productivity? Value productivity?] On the other hand the law which relates to the comparative productivity of large- and small-scale production has to do primarily with the size of the unit."—*The Distribution of Wealth,* pp. 64, 65.

of industry toward the giant organization, or rather as explaining the bearing of giant organization upon market prices, and as explaining also the relation of these market prices to the productivity and the remunerations of the various productive agents.

At any rate, the law can hardly be one of increasing proportional value productivity with increasing size of the productive unit, unless the law is taken to apply not to industries taken as a group aggregate, but to the competing industries inside the group; for it may readily be true that the organization of any industry into the giant form should so reduce its costs that even with an expanding product by weight and tale, the aggregate value of the product should be a diminished one; and this might hold of manufactures as a whole as over against agriculture as a whole.

Nor can the law rightly mean that greater value productiveness goes, per unit of expense, with increasing size. This is not necessarily true; it is safe to assert only that to the greater industrial unit goes the *relatively* greater profit. For, where the elasticity of consumption is not great, and where competition among rival businesses is close, lower prices may obtain to an extent to bring a lower value productiveness for each, and a generally lower average of profits; and yet it may remain true that the greater units suffer least, that to the larger units there accrues a relative advantage.

Or does the law run only to the effect that, in industries of heavy investment and heavy fixed charges, the extra cost of successive items of product is less than proportional to the increase of product, a law which, as of necessity, says nothing as to the aggregate increase in value going with the increase of product, but leaves it possible to be assumed that the entrepreneur will limit his product at the point where the extra expense of production, together with the falling prices upon the original output, balances the extra value represented in the added items?

If this last is the significance of the law, a danger signal is called for; monopoly production would, it is true, follow the policy outlined; but with competing producers *really competing,* there is, as trust promoters and trust apologists have correctly urged, and as the influences behind railroad pooling fully illustrate, no such assurance; competition may bring prices down nearly or quite to the level of the costs of the extra product, practically canceling the earning power of the fixed-charge portion of the investment.[5]

It appears, then, that to find what there really is in this law of increasing return it is necessary rigidly to exclude all influences of improving technique, developing human beings, and all influences ranking under increasing demand for products, and to confine ourselves to the sheer competitive advantages of combination and concentration, (1) for increased weight-and-tale product per unit of expense, (2) for increased value product per unit of expense. Evidently (1) may be found without (2), though (2) is impossible in the absence of (1).

Note that no a-priori reason exists why this law of increasing return might not characterize all industries. If it does not, or if it does so unequally, the reason must be sought in the peculiar nature of the industries in question. The law may fail to hold with certain industries, because by the nature of the instruments which they employ, or of the processes required, e. g., as with land, the business unit cannot greatly increase, the giant organization being impracticable; or the market may be of so limited powers of consumption as to render giant organization impossible.

At any rate, the law is not one referring by necessity to the interdependence of factors or to the constitution of the business unit in respect to the factors included. The law might hold for one industry almost exclusively labor-employing, or land-employing, or machine-employing. For

[5] Cf. Marshall, *op. cit.,* pp. 448, 449.

the purposes of the law more labor may apply itself to labor as well as to land or capital; or the advantage of increasing size may be obtained by adding more capital goods to an existing capital undertaking, or by adding more acres of land to the acres already employed.

The law of diminishing return is perhaps even more difficult of making precise and definite. There is the same tendency to oscillate between value formulations or implications and the weight-and-tale type of concept. Malthus, as we have seen, gave to the doctrine a distinctly social significance, and thereby of necessity a definitely weight-and-tale type of formulation.

But earlier than the time of Malthus' formulation of the law in terms of population and subsistence, the problem of agricultural returns had received thoughtful and authoritative consideration, wherein the two aspects of the law so hopelessly confused in later discussion attained some measure of vague differentiation.

Cantillon, for example, though regarding the problem as, on the outlay side, one of labor units of investment, had yet, in prophetic anticipation of Physiocratic doctrine, rendered over this labor into terms of value cost according to the quantum of subsistence material, land-productive power, embodied in these units. It is, however, true that the significance of labor in the case is for the most part regarded as measurable in units of time.

But with Quesnay the talk is, on the cost side, wholly of labor and capital conceived as reduced to an entrepreneur common denominator, and as aggregated under the head of "depense," a competitive formulation and a value rendering; at the same time, the return, the *produit net,* is conceived as a value surplus over the invested capital outlay.

Malthus' doctrine was evidently not directed to the elucidation of the law of rent, and was formulated in advance of any well-considered and widely accepted doctrine upon

the land-rent problem. Mostly, perhaps, because the discussion was innocent of rental connotations, the formulation was consistent and free from confusion. But in later discussion, and especially since there has appeared to exist a close relation between diminishing return and the rent-cost issue, there has prevailed an almost uninterrupted confusion.[6]

But all of this should become clearer after a catalogue of the different concepts of diminishing returns has been attempted and an analysis of these concepts completed.

I. Based upon the law of satiety applicable to any stock of consumption goods in the hands of any single indi-

[6] Proof of this assertion is in the nature of the case almost impossible of giving; some random citations out of the latest of economic literature are, however, offered:

"The law of diminishing returns is simply a part of the general observation that the product [concrete product? value product?] of any given piece of land does not . . . . bear a constant ratio to the amount of labor [time sum? pain sum? value sum?] and capital [how are labor and capital aggregated?] used in producing it."—Carver, *Distribution*, p. 55.

"Though large applications of labor and capital may continue to produce larger crops, the crops will not be as large in proportion to the labor and capital."—*Ibid.*, p. 56. [The weight-and-tale aspect of the crop is here compared with labor somehow measured, plus capital of some sort or other somehow reduced to homogeneity with the labor.]

And on pages 58, 59, and 60 of the same work the tables given make comparisons between "days' labor with man and tools" and bushels of product, and state the results in "bushels per day's labor."

But on page 60 the value formulation of the law is presented: "Whenever you find a competent farmer devoting a part of his labor and capital [how united?] to the growing of any crop on more than one grade of land, you may be sure that he thinks it pays better to do so than to concentrate all his energies on his best land."

However, later on the same page the discussion lapses into the other concept: "We shall find by comparing the two tables, that if he had only twenty days' labor to use, he could get more bushels by concentrating them all on his best field" [time vs. bushels].

"The law of diminishing returns relates to the amount [?] which can be produced *on a given piece of land* [area?] by varying amounts of labor and capital [?]. . . . . After a certain point, the amount that can be produced on any given piece of land does not increase in proportion to the labor and capital used."—*Ibid.*, pp. 63, 64.

Entirely justifiably Carver takes issue with Bullock (cf. "The Variation of Productive Forces," *Quarterly Journal of Economics*, August, 1902), in regarding the law of diminishing returns as applicable

vidual, and upon the derived concept of marginal utility, there has been, as we have already seen, somehow deduced

not only to land but to all forms of combinations of productive factors; Carver says upon this point: "A complete formula which should show every possible application of this extension of the law of diminishing returns would require a separate term for each and every kind of labor, land, and capital. . . . . The following simple formula will have to suffice:

	Acres of Land...	Units of Labor and Capital...		Product.....
If	X with	Y will produce	.....	P
Then	X with	aY will produce	{ more than aP (increasing returns) / less than aP (diminishing returns)	
And	aX with	aY will produce	{ more than aP { (Increasing economy of large-scale production) / less than aP { (Diminishing economy of large-scale production)	

"It is assumed that a is a positive quantity greater than 1" (p. 66). But a of what? and I of what? We seem to meet here land as superficies, plus labor and land somehow aggregated, and the whole set over against weight-and-tale product. So on pages 90 and 91:

"There is another factor . . . . with which we must reckon, and to which we may give the name of *management*. An industrial establishment is a combination of various factors under one management, and the question of large- or small-scale production becomes, therefore, a question of the proportion between the factor called management, on the one hand, and all the other factors, on the other. [The] formula . . . . which was given as an expression for the law of increasing or decreasing economy of large-scale production, may be modified as follows, to take account of this new factor:

	Management...	Land.....	Labor.....	Capital.....		
If	M with	X with	Y with	Z will produce	P	
Then	M with	aX with	aY with	aZ will produce.....	{ more than aP { (Increasing economy of large-scale production) / less than aP { (Decreasing economy of large-scale production)."	

The following quotations illustrate, within the limits of the para-

a law of falling market price in society for any increasing supply of consumption goods. The haziness of reason-

graph quoted, a shift from one point of view to the other; questions of "pay" are value questions, not "amount" questions:

"An increase in the amount of labor on a given amount of land will never, in any normal case, increase the product as much as the labor is increased. That is to say, except on the frontier, it always pays to cultivate land beyond the point where diminishing returns begin, if it pays to cultivate it at all, but it never pays to cultivate it up to the point where an increase in the labor would yield no increase in the gross product" (p. 73). "Similarly . . . . an increase in the amount of land with such given amount of labor will always increase the gross product. But since so little land is never profitably used in connection with a given amount of labor as to produce the maximum *per unit of land,* it follows that, in any normal case, an increase in the land with such given amount of labor will not increase the product as much as the land is increased" (p. 74).

In other cases the argument goes clearly over to the value-return point of view; for evidently there can be no talk of substituting one factor for another, or of the proper proportions of the different factors in combination, excepting upon the value-return basis:

"Where each factor costs something it always pays to combine them in such proportions that if any one or two of them were increased it would increase the product, but not so much as the variable factor, or factors, were increased. . . . . But what is the most profitable proportion in which to combine the various factors of production? As already suggested, this depends upon their relative cost. . . . . There are, for example, several ways to grow a hundred bushels of corn. One is to use much labor with little land, making the land produce a heavy crop, but getting a small product per unit of labor. Another is to use little labor with much land but enabling the labor to produce a larger amount per unit. . . . . Where land is dear and labor cheap, the former is the better method; but where land is cheap and labor dear, the latter method is better. . . . . The question which is the better method depends upon the relative cost of the two factors" (pp. 76, 78).

Seager's formal statement of the law reads as one of labor and capital set over against concrete product: *"After a certain point has been passed in the cultivation of an acre of land or the exploitation of a mine, increased applications of labor and capital yield less than proportionate returns in product.* . . . . Possible improvement in the method of cultivation beyond the roughest scratching over of the soil may and probably will yield more than proportionate returns in the wheat crop, but after a certain point has been passed, all experience confirms the law that further improvements afford less than proportionate returns."—*Introduction,* pp. 114, 115. But the more accurate rendering is elsewhere, but less formally, presented: "The final 'doses' of labor and capital he applies to his land may be just paid for in the price he gets for the additional produce that results from them. It is to his interest to continue his cultivation so long as it is remunerative. But all earlier applications of labor and capital will be more than

ing by which has been achieved this affiliation of demand price upon marginal utility, and of falling individual demand price upon falling personal marginal utility, and of market price upon some assumed social marginal utility, need not here again concern us. But the further step by which have been worked out a falling marginal significance and a falling marginal demand price for increasing supplies of productive instruments, requires especial attention at this point.

The law of falling price with increasing supplies of consumption goods holds in its usual formulation only because the demand schedule with any one line of consumption goods may be taken as a fixed fact; new supplies can be

covered by the price received for what they added to the product" (p. 117).

Seligman: "In the case of agricultural land . . . . additional doses of capital and labor will yield a relatively smaller produce."—*Principles,* p. 306. "Whenever double the amount of exertion yields more than double the amount of output, we are in presence of the law of increasing returns or decreasing cost. When double the exertion just doubles the output, we have the law of constant returns or constant cost" (p. 250).

Gide (*Principes d'Economie Politique,* sixième ed., p. 132) states in one formulation both laws, that of produce return and that of value return, seemingly upon the assumption that they are really one and that it does not particularly matter whether quantity of labor be compared with value of product or quantity of product be compared with value of labor: "Sans doute il n'est peut-être pas une seule terre dont l'agriculteur ne pût, a la rigeur, accroitre le rendement: seulement, passé un certain stage de l'industrie agricole, il ne peut le faire *qu'au prix d'un travail qui va croissant,* en sorte qu'il arrive un moment ou l'effort à exercer pour forcer le rendement serait hors de proportion avec le résultat. Soit un hectare de terre qui produit 15 hectolitres de blé. . . . . Supposons que ces 15 hect. de blé representent 100 journées de travail ou, si l'on prefère s'exprimer de la sorte, representent 300 francs de frais; la proposition revient à dire que pour faire produire à cette terre deux fois plus de blé, soit 30 hect., il faudra dépenser *plus de 200* journées de travail ou *plus de 200* francs de frais. Pour doubler le produit, il faudra peut-être tripler, peut-être quadrupler, peut-être même décupler le travail et les frais. C'est là ce qu'on appelle *la loi du rendement nonproportional* (nonproportionel au travail)."

Flux's rendering of the law, while ambiguous for the purposes in hand, may, it must be admitted, easily be interpreted into accuracy:

marketed only on terms of such price as will tap lower levels of price-paying disposition. If, however, the increase is one of a productive agent, there results a new and larger volume of value product and a rearrangement of the conditions of demand; the new level of remuneration is to be worked out only as the outcome of a new problem of distribution, upon the assumption of a new volume of value product to be imputed to a new and a rearranged and readjusted set of productive agents. So, then, with population increasing relatively to the other factors, there may be expected a fall in the level of wages, but this only by virtue of two influences, (1) a less than proportional increase in the product to be distributed, (2) less favorable terms of distribution for labor relatively to the other agents concerned in the technological process. The rule and the rea-

"Increase of labor and capital devoted to the cultivation of a given piece of land will, at any rate after a certain degree of thoroughness of cultivation is exceeded, result in increased product, indeed, but that increase will be in a constantly decreasing proportion to the labor and capital to which it is due."—*Economic Principles,* p. 98.

In the main and in general purport Fetter's formulation sounds consistently as one of value expenditure over against value return; as, e. g.: "Economic diminishing return always has reference to value. If a particular kind and amount of a certain material is used in varying combinations with other agents, the value of the added product will not always be in the same proportion to the value of the added agent. The bridge-builder must consider not only what the added material will add to strength, but what it will cost, and whether the result will justify the expense. So the economic problem of diminishing returns is more complicated than the mechanical one" (*Principles,* p. 64). But it is none the less true that the discussion is always near to the point of dropping into utility calculations; as, for example, on page 61: *"The phrase 'diminishing returns of industrial agents,' is the expression of the fact that there is an elastic limit to the utility any indirect good can afford within a given time."* And again upon page 71: "Diminishing return of indirect agents is a special case of the universal law of the diminishing utility of goods. Diminishing return has to do with indirect goods, while diminishing gratification has to do with direct or consumption goods. They are two species or aspects of the same general principle. . . . . Any indirect agent, added to a fixed amount of other agents with which it is technically used, is credited with a diminished utility, just as an additional supply of enjoyable goods coming to meet a fixed demand, falls in value."

soning valid for increasing supplies of consumption goods will not hold for production goods.[7]

II. The Malthusian rendering of the law of diminishing returns has no concern with any principle of rising or falling utility or of rising or falling price, as supplies of consumption goods may either expand or contract. The assertion is merely that *successive increments of labor applied to a fixed area of land must be remunerated by a less than proportional increase in objective, concrete, material output:*

This law is purely a derivative from the technology of agriculture; if economic at all, it is only borrowedly so; it conceives labor roughly in terms of time, or, possibly, in units of effort or stress or pain, but certainly not in terms of value measures or of wage outlays. Nor is the product thought of as in any sense a value aggregate; nor are possible distributive bearings relevant to the distinctly and exclusively social significance of the point of view. The tacit assumptions are (1) that land is present in unchanging quantities and qualities; (2) that labor, unmodified in quality but increasing in quantity, must apply itself to the fixed land situation. The law signifies merely that in agricultural production different productive factors are required; with sparse population some of these factors are gratuitously present; with denser population production comes to depend more and more upon the non-gratuitous factors, that is, upon labor directly or upon stored-up wealth; all of which sums up to mean that for all social purposes crowded land is synonymous with poor land.

III. *That successive increments of labor and capital, applied to a fixed area of land, must be rewarded by a less than proportionate increase in weight-and-tale product:*

[7] As will later be pointed out the prevailing classification of productive factors is a most dubious one, even for dynamic problems; and particularly is it unsafe to assume that labor may be treated in the lump or aggregate, without distinction of grades or occupations. But for present purposes these considerations are, perhaps, not especially significant.

This is a law midway in transition from a social and material computation to a competitive and value computation. Precisely how labor and capital are to be aggregated, whether upon a value basis, or upon the notion simply that capital is merely indirect labor, and how, if the value aspect of the labor and capital is accepted, they are conceived to be related to the land as mere area, and how labor value and capital value and land value are competitively relevant to weight-and-tale product, are evidently past knowing. The law is one of muddled thinking.

IV. *That with an increasing money quantum of costs upon a fixed area of land goes a weight-and-tale product less than proportional to the increasing money costs:*

This law is manifestly one of more nearly completed transition to a value basis. It assumes the land area as fixed and, together with this, a fixed entrepreneur activity of supervision; and it conceives the application of productive energies in terms of value outlay; and it abandons any distinction, *for its purpose,* between capital outlays for labor, and capital outlays for instrumental goods; but it is not at all clear that either the fixed land area or the fixed entrepreneur activity has been carried over into a value rendering; the product remains a non-value fact, though it would be an easy step to carry this over into the value denominator, by assuming that the same price level holds for the new product as for the old.[8]

V. *That upon a fixed area of land, an increasing expense outlay, with fixed entrepreneur activity of super-*

[8] In this general field of analysis, by far the best work known to the present writer is that of Professor Commons in his *Distribution of Wealth* (Macmillan, 1893). The following passages especially deserve citation in this connection:

"The land-owner does not produce goods for his own consumption, but for sale. Hence his land is valuable to him in proportion to the exchange value of the product. . . . . A given area of land does not usually afford room for the production of so large a supply of goods as to affect the general supply of those goods. The prices of products are determined by the general forces of society, operating throughout the world. . . . . So far, then, as the given area is concerned, the price per unit of its product changes so little that we may

vision, is not remunerated with a proportional increase of value product:

Here the adoption of value outlay as over against value product is approximately complete; nevertheless, the land fact and the supervision fact are not fully assimilated to the value reckoning. Capital is conceived as invested indifferently in labor or in instrument hire, but not in land hire; that is, the constitution of the production complex is labor value+capital value+land area+entrepreneur activity; these, as combined in the productive process, give somehow a value product.

VI. *That with a fixed investment in land, an entrepreneur cannot, with successive increments of capital outlay, obtain increases of product proportional in value to the increase in capital expense:*

Here all factors in the production complex, with the exception of entrepreneur activity of supervision, are reduced to the capital-value denominator. But both land value and entrepreneur activity are conceived as constants.

VII. *That with fixed and valued investment in land, and with fixed and valued entrepreneur activity in production, successive additions of expense for labor or for instrumental goods or for both are remunerated by less than proportional additions to the value product:*

regard it as fixed and constant. The total *value* of its product varies, therefore, exactly in proportion to the *quantity* of the product, and as this is subject to the law of diminishing returns, so also must be its value" (p. 138).

"The reason why *average* returns are not as high . . . . is because successive increments yield a less return than would the single increment if it were the only one invested. In other words, the conception of diminishing returns has reference to a *possible* set of circumstances showing what would occur under other conditions, when investments might be increased or diminished. . . . . Where twenty laborers are employed with an aggregate product of 3,200 bushels, and an average product of 160 bushels, if we should ascribe to the first ten laborers a product of 200 bushels each, to the next two, a product of 140 bushels each, and to the last five, 100 bushels each . . . . this is not the actual product of the different laborers, since they all possess equal efficiency; but from an analogy with what they *would* produce under the different conditions . . . . we are justified in dividing up the aggregate product in this manner" (pp. 152, 153).

Subjected to reinterpretation, this appears to mean no more than if value-wise you double only a part of your outlays of production, you will fall more or less short of doubling the value output, a proposition not seriously questionable as doctrine and not especially fertile of new truth. There is also to be noted, in passing, the assumption made—an assumption common to practically all discussion in this connection—that the costs imposed upon entrepreneur capital in the productive process are actually and necessarily restricted to four directions of expenditure, land hire, capital hire, labor hire, and supervision charge.

VIII. *A law of rising costs of production generally and of rising market prices for land products, with increasing population:*

It is assumed that with increasing population there must go an increasing land scarcity; and it is assumed, in addition, that, because of the relatively inelastic quality of this increased consumption need, production must take place at a high level of entrepreneur cost, and that this production will cease only at the point where the necessary cost outweighs the possible price; and that in the process of adjusting and distributing the outlays, the increased selling-price of the product will mostly go for the services of these necessary agents which, relatively to the increasing demand, are assumed to have become relatively scarce, e. g., the land.

That is to say, this formulation of the law conceives of all entrepreneur debits against production as equally costs of production under the value measure; in other words, it reduces land hires and all other hires, together with the entrepreneur's own necessary remuneration, to the value statement as supply-limiting resistances offered to entrepreneur activity as applied to this particular line of production.

But this formulation, while not open to attack for inaccuracy or for lack of business actuality, is evidently a formulation which assumes, as fundamental to the entrepreneur

computation, an existing system of value costs, and, among other things, assumes such action of distributive forces as have attributed a high rent, a value hire, to the better qualities of land, and this by very virtue of the fact that these better qualities of land excuse the producer from high alternative expenses for other productive agents. That is to say, this law reports the results of an economic analysis instead of contributing to such an analysis; it is a law summarizing distributive results rather than a law of production making toward an ultimate solution of the value problem; in last analysis, it is a law of value determination only in so far as it points to the underlying and fundamental conditions determinative of entrepreneur activity, entrepreneur costs, and entrepreneur value adjustments. The relative scarcity of those agents requisite for certain products is the ultimate explanation—on the cost side—for the relatively high exchange position of those products. These high values are, in point of process, reached and adjusted as the outcome of the entrepreneur system of production; in the course of the process, as means to the result, and as motived by the result, there come to be imputed to the scarce agents, under entrepreneur bidding, their high rental and sale values.

IX. *That with increasing population there go in agriculture increasingly large value outlays by the entrepreneur, relatively to the value product:*

But if this is true, it must be true only as based upon some distributive analysis not contained in the law and not in terms appealed to by the law. On the face of it, there appears to be no reason why, with increasing population, agriculture should become less profitable to the entrepreneur cultivator. If his costs, rent and other, become in the aggregate higher, so might also the value of his products be higher: or his wage outlays might be lower, though this again, if true, must deduce its warrant from some source outside the law,—by appeal, perhaps, to the same distributive analysis as that upon which the law itself is based.

Why, indeed, must rent be higher, or, if higher, the other distributive shares also lower? The law—valid doubtless—is distributive in tenor; land receives its larger ratio of the value product, but this depends as much upon the peculiarities of the demand for the product as upon the technological conditions of its production. With some commodities, indeed, increasing difficulty in production cancels all the value of the agent. That there could be no land scarcity but for the limited productive powers of any limited area of land; that is, that high rents could not exist in the absence of the technological fact of the diminishing responsiveness of land, leaves it, in the absence of other conditions, still possible that rent should fall with the diminishing weight-and-tale return. This form of the law of diminishing return is, then, not so much a law illuminating other problems as deriving illumination from other solutions; and all laws either of diminishing or of increasing value return are necessarily of this sort.

X. *That with increasing population there goes in agriculture an increasing entrepreneur value outlay relatively to weight-and-tale product:*

A useless formulation excepting as working out to the purport of law VIII, viz., that the product being, relatively to costs, smaller in value, the price per unit must be higher.

XI. *That with increasing population there goes a higher rental and exchange value for land:*

The same assumption of progressive land scarcity is made here as in VIII; the law is, indeed, in some respects practically a restatement of VIII, but with some difference in emphasis. Underlying either law is the assumption that the food demand increases in approximate proportion to the increase in population, that despite the fact that labor and capital are contributory factors, their relation to land is rather complementary than substitutional, and that thereby the emphasis of demand falls upon land as productive instrument.

And it is to be noted that, together with increasing population, there is taken to go without saying an increased supply of labor effectiveness, and, almost without saying, an increased aggregate of instrumental goods—technological capital. But, in fact, were the average quality of labor so much deteriorated as to amount in the aggregate to no increase in labor power and as to permit no increase of instrumental goods, it would still be true, the food requirement being taken as increasing with the numerical increase in population, that the emphasis of demand would rest upon land. All lines of product would suffer in output, but non-food lines more markedly than food lines, and this primarily because of so high a value upon food as to displace, in some measure, other lines of production, to widen the land-value differentials above the marginal powers, and to give high rental values to the land.

But, if so, there must be behind all this the tacit condition or assumption that the demand for agricultural products traces back to an especially inelastic quality of consumption. If with a doubled population, land powers being assumed to be fixed, there went no increase of labor power or of capital power, there could be no increase of land emphasis, if only it were as easy to cut down food consumption as other consumption.

But still more important, because more actual, is the possibility that with the increase in population should go a more than proportional increase in the per-capita efficiency of men as wealth-producers: what then? The present rendering of the law appears to say that, with the factors of production other than land outstripping land in rate of increase, those products markedly of land origin will rise in value, and that therewith will also rise the rent and the value of the unit area of land.

But inasmuch as land is not the only productive factor in agriculture, it must be recognized that the demand for agricultural products is at the same time a demand for non-land instruments of production, that is to say, a demand

for labor and capital. Therefore, were it true that labor and capital were in the main substitutionary rather than complementary in their technological relations to land in agricultural production, there could be no such redistribution of production-distribution advantages as is implied in the law as formulated. Thus, also, if it were true of land that it could take the place of labor and capital in any large share of their uses, rather than serving as co-operating complementary productive instrument with them, land could never have experienced the fall in rents and in market price characteristic of the past half-century.

It follows that, under the assumed conditions of increasing population, of only proportionately increasing food requirement, and of more than proportionately increasing labor effectiveness and capital expansion, there is no basis of foretelling the effect upon land rents and land values otherwise than accordingly as assumptions are made as to the direction of human development. Improvements in transportation or in the technique of production may be so great in the direction of agriculture as to make even the best grades of land free land, and thus to cancel the importance of rent in the computation of costs, and to leave the food supply to find its relative cost purely in the relative outlays for labor and for non-land instrumental goods.

But in the degree that the actual inelasticity of the consumption of agricultural products—not all are food products—is overstated in the assumption, and in the degree that the development of human productive powers may not take place in food-product directions, must this solution undergo modification. On the other hand, a gain in land rent must follow upon an increase of non-substitutionary supplies of labor; but whether this would be accompanied with any marked rise in the prices of food products would depend greatly upon the character of the increase in the supply of labor, whether, for example, and in what degree, it were adapted to other than agricultural production.

If these solutions shall appear to be disappointingly vague and conjectural, the explanation must be sought in the nature of the problem and of the assumptions necessarily attendant.

The foregoing analysis of the various different concepts of diminishing return—and there are possibly still others waiting to be catalogued—should have sufficed to make it clear that such formulations of the law as promise significance or serviceability for economic purposes of any sort, competitive or collective, are three in number:

1. A dynamic and sociological generalization foretelling a diminution in the per-capita command of consumable goods, by reason solely of the society coming to contain more members, these being assumed to be substantially unmodified in all relevant aspects.

2. A law in the dynamics of competitive economics; a forecast of changes in the relative distributive shares accruing to the different agents and instruments in production technologically viewed, changes due solely to changes in the relative supply of these concrete factors; thereby, changes in their relative value through the capitalization of their income-earning power; and thereby, also, *upon the supply side* (and for whatever the cost of production computation may be worth), and solely by reason of these distributive shares functioning as costs in competitive entrepreneur production, a forecast of the relative changes in the market prices of the various sorts of commodities technologically dependent in various degrees upon the use of these differently remunerated productive facts.

3. A static, competitive, entrepreneur law expressing the disadvantages accruing to the entrepreneur from any relative excess or defect in the quantities employed of any productive agent or agents, in view of the existing levels of compensation for these different agents—a law formulating the disadvantage from the unskilful combination of cost goods.

It is to be noted with regard to Law (1), the population-food law, that the reasoning upon which it is formulated abstracts entirely from the possibility that human development may—at least in some measure—avail to enlarge the land supply, from the possibility also that agricultural technique and transportation effectiveness may appreciably modify the situation, and finally from the possibility that the sources of food supply may not remain essentially agricultural, and that the food requirement may not increase precisely in the ratio that the labor supply increases. That, upon the assumptions made, the social product, food and other goods together, must be unfavorably affected seems to be a ready and necessary inference from the general principle that if some, but not all, of the productive factors are doubled, the weight-and-tale product will not fully double.

Law (3) carries over into the competitive field this principle that a shortage in any one factor of production affects the product unfavorably; those factors increasing least rapidly, or not at all, take on relatively a more or less pronounced scarcity, and thereby acquire scarcity values as compared with the increasing factors, the degree of the scarcity depending upon the degree of technological monopoly held by the factor in question, that is, upon the substitutions and upon the terms of the substitutions possible in the case,—a changing problem with every change in the direction of human efficiency in the technique of production.

With every change in the per-capita productiveness of society, human needs and desires being assumed as a constant, there goes, of course, a fall in the average significance of new increments of product, a law of diminishing utility return per item of weight-and-tale product. But while this law is consistent with an expanding weight-and-tale productivity—depends indeed, upon it—the law is not inconsistent with unchanging conditions of value productivity. For *value productivity is distributive in reference*—

has to do, that is, with the different factors considered as share-takers in the division of product, and with the relation of the different shares to one another. Being a question of value, of exchange relations, it becomes a question of the relative shares in the total output of value product. Thus if all factors in production were increasing with equal relative rapidity, two yards of cloth, two pairs of shoes, and two bushels of wheat being produced where before the product was only one of each, there is no necessary reason why there should be either increasing or decreasing value productivity for any factor in production. If, then, there is occasion to forecast diminishing returns for any factor, it seemingly must be by reason of some relative inelasticity of supply supposed to attach to some other factor or factors in production. It looks, then, as if the peculiar conditions surrounding the land supply must furnish the only serious basis and occasion for all diminishing-return discussion, so far as it is something more than an entrepreneur law of disadvantage from a badly constructed production complex.[9]

But upon what assumption could there really take place

[9] It is of course unfortunate that the established terminology should speak of this principle as "diminishing returns for land;" where there are diminishing returns of any sort, these are not for the land but for the factors co-operating with the land. But purely as a production process, the returns are neither separately for the land nor for the other factors, but only for the factors in the aggregate, as a production complex. When a separation is made so that the talk may be either of the absolute or of the relative shares, the discussion has passed over from the field of technological production to the field of value distribution,—is no longer, that is to say, a matter of causes from the point of view of production, but of results from the point of view of distribution,—not a question of quantum or of relative share produced by any separate factor, but of the value result attributed or imputed to that factor. And, as distributive result, the fact may be that, despite a diminishing return to the aggregate complex, there may be an increasing return, both relative and absolute, to some among the factors. *As a distributive doctrine,* then, the terminology should rather speak of diminishing returns to the non-land factors; while as a production doctrine, no question of the separate shares of the factors should arise; the talk should be of diminishing returns in agriculture, or of diminishing returns in landed production, but not of diminishing returns to the land.

this equal proportional expansion in all productive factors, in such sort as to leave the value resultant one of unmodified exchange ratios and the distributive outcome one of unchanged proportionate shares? Only upon the assumption that the increase in the supply of each factor of production has been accompanied by a proportionate increase in the demand for the various commodities especially dependent technologically upon the respective factors. But increase in labor supply, if it comes by increase in number of human beings, rather than by expanding individual efficiency, is certain to do at least one thing, viz., to bring with it an approximately proportional increase in the food requirement; and precisely the contrary will be the fact, if the increase of labor power accrues through higher *per-capita* powers of production.

And precisely as the food requirement is the most inelastic of needs in face of shortage, so it is least expansive in the event of expanding supplies. It follows that what appears upon its face to be a prospect of constant value return may turn out to be one either of falling or of rising distributive advantage for land. And as we have already seen, this is further complicated by considerations relating to the direction in which technological development may take place.

Our third law of return, the static law of the proper proportions for the productive factors in the entrepreneur complex, is obviously the only one of the three laws having significance for the cost problem of any particular entrepreneur *at any particular time*. Law (2) is a forecast of probable *changes* in the conditions under which the cost-value problem must come to be worked out. That the hire of any particular factor will be—or may be—greater or less than it now is, does not make greater or less the present hire, and does not modify the present relation of the present hire to present cost and present value. It is unneces-

sary to look ahead fifty years in order, by finding what the costs will be then, to know what the costs are now.

It must now be noted that, simply because this law of bad proportions between productive factors is an entrepreneur law, it must, in any accurate formulation, take into account the entrepreneur himself as a productive fact. As entrepreneur, *he* is a fixed quantity, and at some point or other the law of disadvantageous combination, of diminishing value return, must apply to any further increases in the magnitude of his operations, and must set a limit to the application of the law of increasing returns with the greater size of the production complex.

It remains once more to call attention to the dangerously technological tenor of all this diminishing-return discussion. For purposes of retrospect or of prophecy, and in the field of value distribution no less than in the field of social welfare, there are meaning and interest attaching to the broadly admitted threefold classification of productive factors. But it is equally clear that the classification is inaccurate and unworkable for close theoretical purposes; that the technological relations between the different production goods are in a state of constant flux; that the substitutionary relation is everywhere found in a measure, and is almost as likely to obtain between classes of factors as within any one class, while the complementary relation is not appreciably rarer within a class than between classes; that the determination in any specific case of what share is land instrument and what share non-land is impracticable or impossible; and finally and chiefly, that in competitive production no one is concerned in any way either with the validity of the classification or with the accuracy of its application.

For, from the point of view of the individual, all questions of cost are questions of value expense, and capital is merely the fund out of which the costs are advanced and

into which the instrumental charges and all other production expenses are reduced. Thus while, if one likes, he may distribute this capital expense among its different technological and other items, including much that cannot be classified as either land, labor, or capital, it will remain true that the outlay for labor hire is a capital outlay, the outlay for capital goods likewise a capital outlay, the outlay for land also equally a capital outlay, and therefore that the law of diminishing return is, for competitive purposes, a law of diminishing return upon capital and not upon land or instruments or labor. And to show that this falling return upon capital is or is not due to unfortunate combinations of technological items indefinite in variety and susceptible of indefinite classification and subclassification, tripartite or other, would leave it still true that, for all competitive purposes, the only falling return having significance or interest must be the falling return upon value cost, expressed under the private-capital denominator. But all this will become clearer, as approached from a slightly different point of view, in the next chapter.

CHAPTER XXIV

THE DYNAMICS OF VALUE AND OF DISTRIBUTION

As has already been sufficiently shown, the long-time computation of costs, the dynamic aspect of economic theory, points not to a new value theory or even to a supplementary value theory, but simply to the tendencies and influences making for change in the fundamental conditions under which the value problem must later be worked out, the costs fixed, and the production distribution reached.

These changes in fundamental conditions are evidently restricted to two sorts, (1) changes in the demands for consumption goods, and (2) changes in the supplies or in the ownership of the productive agents, instruments, rights, and opportunities.

That either of these two lines of influence may affect the remunerations of productive factors, and thereby their values, is readily seen; that changes in the demand for products should have the same result carries its own warrant in the very statement; so, also, that changes in the supply of any factor of production must affect the remuneration of it commends itself as obvious—looks, indeed, much simpler and clearer than it really is. But that changes in the supply of some factors have of necessity direct and important bearing upon the remunerations of other factors is a long distance away from self-approving.

It is nevertheless true:

> A demand for means of production arises only when, on the one hand, we are *obliged* to employ them or else go without what they produce; and when, on the other hand, we can employ them, inasmuch as we have at our disposal the necessary complimentary goods. . . . . It follows . . . . that the effective demand for means of production must vary, not only when there is a variation in personal wants, but also when there is a variation in the quantity of complementary goods.[1]

[1] Wieser, *Natural Value*, p. 102.

The demand for plows is truly derivative from the demand for foods, but not directly; in any event, it is equally to be said that the supply of land furnishes the demand for plows; lumber affords a demand for nails, horses for wagons, wagons for horses, plows for land, men for plows, plows for men, horses for stables, stables and horses for carpenters and for stable boys, horses and wagons for harnesses and for drivers, etc.

It is true that not rarely the possibility of substitution exists between different orders or varieties of productive agents,—that one sort takes the place of another, supplies the demand for it, rather than furnishes a demand for it. But more commonly it is through the principle of complementarity rather than of substitution that most of the dynamic forces in economics exert their influence upon supplies of products, upon entrepreneur bidding, upon costs and distributive shares, and upon the exchange relations of goods, as it is likewise under this same principle of complementarity that various perplexing theoretical problems both in static-value imputation and in dynamic-value imputation are presented. New combinations of productive factors entail what new value results and what new distributive outcomes?

The usual treatment of the problem, as one centering about questions of multiplying human beings as over against a geographically limited land supply, emphasizes what is, for economic prophecy, the most important and interesting phase of this investigation; for it is again to be emphasized that only in the expectation that some factor or factors of production will come to be relatively scarce is there anything to be discussed. The laws of increasing return are laws of change in one aspect of human productive ability and adaptability; the laws of diminishing return are laws reflecting the influence of change in the relative supplies of the different factors of production. It is, perhaps, true, practically speaking, that, but for the limitation upon the

land supply, there could be nowhere any question of diminishing returns for social or dynamic problems.

And it is again to be emphasized that, with changing supplies of productive factors, such changes of combination, of product, of value of product, and of values of agents as take place, must take place under the guidance of entrepreneur activity and as problems of entrepreneur management. Technological productive contributions are such only relatively to the entrepreneur need, the entrepreneur combination, and the entrepreneur bid. As distinguished, then, from the ordinary threefold classification of productive factors, land, labor, and capital, there must, at the least, be established a fourfold classification including the activity of entrepreneurship. And our most serious problem is thereupon to decide whether, even as modified, the traditional distribution of productive categories is either workable in theory or serviceable in applications.

Precisely how the dynamic forces shall be classified is, from one point of view, perhaps not an important matter. Clark's fivefold division into changes, (1) in population, (2) in capital, (3) in industrial methods, (4) in business organizations, (5) in human wants, is possibly as serviceable as any other. Making some effort, however, toward arriving at a classification more nearly approaching the ultimate, we shall, perhaps, settle upon something like the following: (1) modifications in humanity, (2) in environment. Under modifications in humanity are to be catalogued the following lines of change:

(*a*) in numbers.

(*b*) in wants { changes in aggregate wants, changes in relative intensity, changes in kind and direction.

(*c*) in capacity { changes in industriousness or strength, changes in technique, changes in organization.

Under modifications in environment:

(*a*) in land { changes in the sources of food supply, / changes in the sources of raw materials of industry.

(*b*) non-land changes, capital goods.

(*c*) changes in loan fund and in property institutions { from the point of view of each entrepreneur an objective, environmental fact; from the social point of view merely relations among men; perhaps properly to fall under "modifications in humanity."

But here again the question presents itself as to what purpose, other than schematic, this classification may be made to serve; but if for nothing further, it will, at any rate, afford a convenient guide for purposes of exposition.

Doubtless it is possible to make some broad generalizations with regard to the effects of increasing population upon land values and upon land rents in the aggregate, irrespective of whether all lands must equally share in these effects. Possibly also, though less securely, something might, in wide generalization, be said of the effects of increasing machinery upon rents or upon wages, all this, likewise, without attempt to differentiate the sorts of machinery, and also without attempt to distribute labor into different sorts and grades in its technological relation to machinery.

But the difficulty with all this is that all of it has its basis in the technological relation of different instruments and agents to one another, and that these technological relations will not classify in even a loose and general coincidence with the traditional threefold classification of productive factors.

Increase of literary ability is technologically irrelevant to the increase of inventive power in industry; increase of artisan skill may intensify the demand for some machinery, the while that it displaces other. Again, the multiplication of unskilled labor may in some directions displace skilled labor or the labor-saving appliances produced by it. It is, for example, practically impossible, because unprofitable,

to introduce labor-saving machinery into Mexico or India; crude labor in those countries is too cheap compared with artisan labor. At the same time, enlarged supplies of some grades of labor furnish a demand for other grades of labor, e. g., carpenters for architects and masons, masons for hod-carriers, spinners for weavers, and so on indefinitely. Again, some machinery creates demand not for land as complementary good, and not, in any appreciable degree, for labor, but for other machinery. In the history of English industry, the spinning jenny placed an immense premium upon the invention of the power loom, and both called shrilly not for more men but for the introduction of power machinery.[2]

And mere increase in population, to the extent that it should be attended by the traditionally menaced poverty, would not greatly intensify the demand for champagne lands, or place high values on diamond fields; something would result of advantage for apple and prune orchards, a lower degree of advantage to orange and walnut groves, great stress upon fuel and iron mines, and famine rents for the sources of the coarser foods. New coal lands would injure the wood lots, and benefit the iron mines. New fisheries would probably lower the income from pasture lands, and, perhaps, intensify the demand for cereal lands.

The truth is that all these relations, on the one hand, of complementarity, on the other, of substitution, depend upon the particular situation in point of technique, and have not even the remotest relation to the land-capital-labor classification. It is possible enough, it is indeed characteristic of modern life, that modifications in technique, that is to say, in the human factor of production, greatly reduce the pressure upon land. This is especially noticeable in the effect of farm machinery toward the lowering of agricultural rents taken in the aggregate. Improvements in transportation work in the same direction, and at the same time

[2] Fully worked out, the doctrine of this paragraph has some important applications to immigration problems.

do another thing, they create accessibility; thus, practically speaking, they create land.

So, new knowledge is constantly sending much old machinery—and some new machinery—to the scrap pile, and this, not rarely, with the requirement of no new machinery.

So again, changes in the standards of living or changes merely in the direction of consumption may cancel the alleged effects of the multiplication of human beings upon rent and interest: for example, vegetarianism would postpone the land famine for a succession of centuries.

And changes in technique may conceivably be so far-reaching as to leave to humanity practically no land problem at all, or, at least, only a mining-land and dwelling-land problem:

> Chemistry may some time solve the problem of food production without recourse to agricultural methods. The secret once known, the nitrogen in the air of the back yard and the ton of coal in the bin may furnish food for an ordinary family for a year.[3]

But none of this is to deny that there is a dynamics to the value problem, or rather to the distribution-and-cost aspect of the value problem, but only to deny that much more can be done with it than to surmise here and there, as well as may be, what are the probable changes in conditions, and then to deduce the probable and possible economic significance of some few of these changes.

Increasing population appears reasonably probable, though there is question enough as to the races and the

[3] Davenport, *op. cit.*, sec. 352.

It is a noteworthy as well as a perplexing fact that one of the economists firmest in adherence to the separate land and capital categories, and strongest in the conviction that interest and wages are cost facts while rent is not, should have given allegiance to doctrine which, sufficiently elaborated and worked out to its necessary conclusion, must cancel the possibility of all discussion of the laws of return as based upon the threefold division of categories; and incidentally also, would strike the pen across most of the pages of his own admirable and suggestive work upon the distribution of wealth. (See Carver, *Distribution of Wealth*, p. 85, or quotation, note *ante*, p. 131.)

classes likely to furnish the increase. No attendant changes appear probable of a sort to prevent an increasing stress upon land, varying in degree, it is likely, according to the different qualities and capacities of the land, but probably affecting in some measure all or almost all lands. But the swamps of the Amazon or the African jungle may for a long time remain an undisturbed surplus. And in this connection also it would be possible for the growth of land rent to impose important changes in the distribution of purchasing power in society, and thereby to work appreciable modifications in the direction and volume of different consumption demands, with wide and conflicting circles of varying interaction.

From the land source, together with other influences bearing upon the consumable product at the disposal of the human race, more or less pronounced effects may be deduced as probable upon the standards of living of the different races and nations of men, these effects being different with the different races and in the different levels of society of each different race. And various interactions between standards of living and rates of multiplication may be more or less dubiously asserted. And possible bearings of standards of living upon wages may be worked out through the general relation of the density of population to the wage level.

But what is, in truth, other things remaining unchanged, the bearing of increasing population upon the wage level?

To make the question accurately intelligible it must be assumed that the different grades and kinds of labor increase proportionally. And even then will it do to assert that wages must fall? How comes it to be true, if it is true, that the volume of population influences the wage level? Is it, for example, possible to say, with Carver, that "the wages of labor are determined by an equilibrium of two forces,—the productivity of labor, on the one hand,

creating the demand for it, and the standard of living, on the other hand, limiting the supply of it." [4]

Not at all denying the bearing of these two forces as somehow influencing wages, each in its own way and time, it is yet to be objected that the ways and the times are separate, that the offered explanation of wages is really a mixture of long-time and short-time influences,—on the one side a static category, a situation, on the other side a dynamic variant making for possible changes,—and then a balance somehow struck between them. The analysis neither stays in nor abandons the field of entrepreneur wage costs, but confuses the costs as they are with supposed causes of the costs, and with possible or probable variations of the costs. But, even so, the argument is open to further serious criticism; for in reality the standard of living is itself a derivative from the productivity of the labor; the standard of living, as supply term, set over against productivity as the demand term, will, then, hardly serve as a full explanation of wages. But however this may be, it is in any case clear that as a question of existing wages the productivity of today cannot, for any purpose of present costs or present wages, or under any entrepreneur computation, be equated against the labor supply of some years hence. The wages of all the yesterdays and of today may possibly have something to do with the supply of labor twenty years hence; and the supply of labor of that time will doubtless equate against the demand of that time. The supply of today has precisely that same relation to the demand of today. Today there is no equating of the demand or supply of today with the demand or supply of any other time. Any alleged effect from wages, through standards of living, on the supply of labor,—whether, on the one hand, the position urged be that high wages and high standards of living stimulate the birth-rate and the percentage of maturities, or whether, on the other hand, the

[4] Carver, "The Marginal Theory of Distribution," *Journal of Political Economy*, March, 1905, p. 263.

effect be asserted to be precisely the reverse—may be equally well admitted or denied with equal irrelevancy to all problems of the current adjustment of wages; productivity is as it is. Investigation of these lines of influence is, then, merely a more or less successful attempt at a historical explanation of the present labor supply, and, so far as the labor supply has to do with the individual wage, is an attempt to explain *some of the causes* of the present conditions controlling or influencing the ruling level of wages. But the ruling level of wages will be the same whether or not the historical explanations offered be well supported. So the wages to rule twenty years hence may today be possible of vague conjecture; and in the making-up of the prophecy some bearing may be ascribed to the expected population totals of that time; and these totals may, with more or less justification, be attributed to the standards of living prevailing today. But all this is prophecy, and has nothing to say for the wages of today.

Nor—and this is the important fact for the present discussion—even after the twenty-years' term has expired, will such population changes as may have taken place have overmuch to say; it is vastly dangerous doctrine to assert, even on the supply side, the dependence of wages on the supply of labor. For consumption goods, truly, the reasoning rightly runs that an increased supply diminishes price; but for production goods the doctrine, so far as it is applicable at all, applies in quite other significance and to quite different results. Whenever the very increase in supply itself implies and necessitates a change in the volume of demand, the demand-and-supply formula, entirely accurate for consumption goods, becomes, for production goods, entirely misleading unless used in a very different sense.

If the labor supply increases, how can anyone know that the wages must fall? Is it certain that either the per-capita productivity by weight and tale or the per-capita value productivity must suffer? Not unless the other

classes and qualities of agents have failed to make a corresponding increase. And suppose that they have not; with an increased labor supply the social dividend is increased; is it to be assumed that only the old total of wages can, under the new aggregate productivity of labor, be distributed among laborers? If labor has doubled and all kinds of it have doubled, but if, at the same time, the other productive factors have failed to increase or to increase with corresponding rapidity, it may be taken as true that not quite twice as much aggregate social product will be possible; and out of this somewhat smaller per-capita product a larger *relative* share will go to the agents relatively scarce, and a somewhat smaller relative share to the laborers. And this is all there can possibly be of truth in the proposition that "the wages of labor are determined by an equilibrium of forces—the productivity of labor, on the one hand, creating the demand for it, and the standard of living of laborers, on the other hand, limiting the supply of it" (Carver).

To put it another way: Since with the change in the supply of labor the value product to pay with is all the while changing, that is, the productivity demand is changing, the effect upon the wage level must sum up as the solution of two inquiries: (1) in what measure, relatively to the increase of labor, is there a resulting increase in the total product to be distributed? (2) in what measure does labor, in the distributive process, fail of receiving the whole of the increase in product resulting from the labor increase? It is evident that an appeal to the ordinary demand-and-supply formula does not promise great results for the purposes of this problem.

Inasmuch as changes in population can take place only with attendant changes in the demand for goods and in the production of goods and in the distribution of purchasing power, there is room here for all sorts of varying influence upon values and upon distributive shares. No especially

serious difficulties, however, present themselves in this regard.

Possible changes in the productivity of human effort, through increases in vigor, in earnestness, in trustworthiness, and in skill, require some attention. And, for the moment, let changes in technique be excluded from consideration, so that the case may stand simply as one of emphasized power in lines and methods and directions already established. Twice as efficient a man is, for production purposes, two men; on the production side, this amounts, then, to a population increase. Are land rents to be thereby increased, or is the value imputation in general to be otherwise affected disadvantageously to labor? Seemingly so; for while, with larger weight-and-tale productivity and a greatly augmented social product, the absolute share of labor may increase, its ratio share will suffer. But all this is subject to amendment accordingly as the increased purchasing power, attendant upon higher productivity and higher wages, turns out to be directed. If, for example, all this new demand power were directed to the purchase of new sorts of personal service, or to lines of goods in which labor alone could be applied, the new labor power could furnish no new demand for land or for any other instrumental good, and no advantages in distribution could accrue to any of these non-human factors of production as against labor.

Better organization of production may be merely institutional, or it may point directly to an increase in entrepreneur efficiency; if, however, it be assumed that the increase of product is due solely to an improvement in entrepreneur ability, it may, *prima facie,* be expected that, out of the resulting higher social dividend, the larger share will be distributed to the non-increasing factors, employee labor being here included. But here also the breadth and the undiscriminating inclusiveness of the accepted classi-

fications destroy all promise of accuracy in the conclusions. Better organization does not apply equally to all grades and kinds of labor, or equally in all businesses and industries, or equally to all kinds and varieties of instruments. The threefold classification must be especially misleading here.

But even more misleading is the traditional classification as related to changes in technique. Hygiene may render pill-rolling machinery useless; inventions may largely displace both labor and instrumental goods, and may shift the emphasis over upon land generally or upon particular kinds and qualities of land. There is, in truth, no limit to the possible and the probable permutations here; here, indeed, it is always the unexpected that is the probable. How complicated these problems are, and how dependent for their solution upon assumptions tacitly made or unconsciously implied, may be seen in an analysis of the relations of improvements in transportation and in crop-raising technique to the rental values of land.[5]

[5] Traditional discussion of the rent problem has assumed a practically inelastic consumption for the products of agriculture. Making no question that, relatively to other consumption goods, food products manifest a great inelasticity of consumption, it is nevertheless to be asserted that this inelasticity has been, in almost all rent discussion, past or current, greatly exaggerated, to the serious prejudice of the theoretical deductions. It is at any rate clear that "the law of diminishing returns falls far short of a full theoretical equipment for the analysis of rent movements. This law points merely to one very important fact in the supply aspect of the problem. But diminishing returns are the condition upon which rents depend rather than their ultimate cause. . . . . No economic explanation in terms of supply alone is exhaustive or satisfactory. . . . . How rapidly, for example, rents may advance with an enlarging market for products, must depend upon the measure in which demand will be retired by rising prices. How rapidly rents may be made to fall by the opening up of new lands, is incapable of estimate till something is known of the degree in which falling prices may be expected to attract a larger consumption. All rent tendencies must be studied, not alone from the point of view of the facts peculiar to supply, but as well from the point of view of the peculiar nature of the demand.

"Commodities vary greatly in the elasticity of consumption. With falling prices, the demand for books, for example, greatly expands, while higher prices would be met by greatly decreased consumption. Where consumption is very elastic, small changes in price work large changes in consumption. It follows, then, that small changes in supply

The relations of expanding capital supplies to land rentals and to wages can be, so far as they are profitable of

must work small changes in price, while large changes in supply work only limited changes in price.

"But where the consumption is inelastic, the reverse of all this is true. Small increments in supply are marketable only at considerable decrease in price, while large increases in supply work enormous price reductions. Much that is peculiar to rent movements is to be explained by the fact that the consumption by society of the products of the earth, and particularly of agricultural products, is extremely inelastic. Consumption of food products cannot be very largely increased, nor is it possible without acute suffering greatly to reduce consumption. It is true that in considerable measure one product may be substituted for another by reason of minor changes in price, but the total volume of consumption adjusts itself to the total volume of supply only through relatively great price fluctuations. Were the fact otherwise, advances in rents following upon increased population would have been much less considerable, and a fall in rents resulting from the opening up of new supplies of land would be relatively unimportant.

"Bearing in mind that increasing supplies of agricultural products are unmarketable unless at rapidly falling prices, it becomes evident that all causes tending to increase the per-acre productiveness of land will mostly manifest themselves in the abandonment of marginal lands and the decrease of rental totals. Thus all progress in agricultural skill, like better methods of crop rotation, or improvements in the applications of chemistry to the production of fertilizers, by which the per-acre output of land is increased, will tend toward the disuse of the poorer qualities of land. Likewise all improvements in transportation facilities, by which new and more fertile lands are brought into use and the abandonment of poorer lands made possible, must reduce the rent differential.

"And even with the new lands only equally fertile with the old, the reductions in the cost of transportation would reduce the differential of advantage enjoyed by the lands nearer the market. Not less land would be used, but the difference in advantages would be lowered. In the diagram the transportation charges of 2, 4, 6, 8, etc., give rentals of 14, 12, 10, etc. Reducing the cost of transportation by one-half lowers the differentials to 7, 6, 5, 4, etc. It is true that this cheaper transportation would cause some of the more distant lands to be brought into cultivation. But only a small increase in products could be marketed without so great a fall in price as seriously to affect rents generally.

	LAND	
14 2	30	1 7
12 4	30	2 6
10 6	30	3 5
8 8	30	4 4
6 10	30	5 3
4 12	30	6 2
2 14	30	7 1
16	30	8
	30	

"Assuming, however, that the land opened up is of distinctively inferior quality, one might look for a rise in rents. But the question is whether this wider differential of fertility can be sufficient to more than offset the diminished differential of transportation.

"Suppose that the land is 30, 28, 26, 24, etc., in productiveness, and that the transportation charges are 2, 4, 6, 8, 10,

discussion here, mostly deduced from the principles already established. But much depends upon the sense in which

etc., as in the previous illustration. Each grade of land, from the margin, increases in rent by 2 for differential of fertility, and by 2 more for differential of freight.

"If now the freight differential falls to 1 for each grade, the rent payments will fall from 20 + 16 + 12 + 8 + 4 to 15 + 12 + 9 + 6 + 3. Even could cultivation extend two grades lower without a material fall in prices, this would carry the rent payments only to 21 + 18 + 15 + 12 + 9 + 6 + 3. In fact, however, prices would greatly fall upon the assumption of this extension. These lands could no longer be treated as 30-, 28-, etc. (bushel) times one (dollar) lands. The 2, 4, 6, 8, etc., as differential in bushels, would still remain, but these bushels would have greatly shrunk as measured in terms of market value. . . . .

	LAND	
10+10=20	30	10+5=15
8+ 8=16	28	8+4=12
6+ 6=12	27	6+3= 9
4+ 4= 8	24	4+2= 6
2+ 2= 4	22	2+1= 3
	20	
	18	
	16	
	14	

"It is not even true that improvements in the art of agricultural necessarily lower rent, if these improvements are such as to apply solely or mostly to the better lands. If, for example, there were in cultivation

2 units of 30-bushel land
3 " " 29- " "
5 " " 28- " "
6 " " 27- " "

and some method were devised of doubling the output of classes 1 and 2, it would still remain necessary to cultivate some of the 27-bushel land, while the 30 and 29 lands would have become 60 and 58 lands with their rent differential measured from the old margin of 27.

"In no case, then, is it safe to assume that the mere fact of the extension of cultivation to inferior lands means of necessity an increase in rents. For anything like an accurate forecast of rent tendencies in any case, there is required a Gregory King's law of altogether unattainable accuracy. Were the demand for agricultural products as elastic as is the demand for books, or sewing-machines, or bicycles, improved arts of transportation would probably raise rents. If, for example, rent differentials were due one-half to lower expenses of transportation, and these expenses were reduced by one-half, it would become practicable to cultivate much larger areas of land, if the demand for products were such that the prices should not sharply fall. In this case, rents would increase in the total.

"Ultimately, then, we fall back upon the character of the demand as the critical point in our rent investigation. The law of diminishing returns explains the existence of rent only after demand is assumed. The degree of rise or fall in rent can be guessed at only in view of the demand.

"Some questions we can hardly even guess at. It is com-

the term *capital* is to be understood. If taken as loan-fund or as competitive capital in the most inclusive sense, it would follow that cheaper capital, meaning merely lower rates of interest, might raise or might lower rents accordingly as, under the prevailing conditions of technique, the borrowed purchasing power should be directed to complementary or to substitutionary goods.

But if the term capital be taken to mean non-land productive instruments, further assumptions become necessary. How elastic is the consumption of agricultural products? And how far is it taken as possible that non-land instruments can be made to function successfully on lands which were before submarginal? Costless capital goods might conceivably go so far in substitutionary lines as to destroy all differentials of serviceability between different lands, or even as to render all lands equally valueless.

But all this detail grows wearisome, simply because there can never come any end to it; at the best, it is mostly

monly assumed that improvements in farm machinery work in line with improved fertilizers and improved methods to reduce rents. This is correct for such machinery as increases the per-acre output. But for the most part, these labor-saving devices are not land-saving devices. They increase the amount of land employed in producing a given amount of product; thereby they lower the margin of fertility, exactly reversing the effect of fertilizers. If rents fall, it must be from the fact that cultivation is carried so far upon inferior soils, as through a considerable expansion of supply, to lower prices, and to do this to such an extent that the influence of an increased differential in product is overcome by the necessity of marketing the products at lower prices."—Davenport, *op. cit.*, pp. 86–91 (somewhat adapted).

But a caution is needed here. Doubtless the lands especially affected by new transportation facilities may exhibit a marked rise of rentals. So likewise the opening up of America may have had more effect to advance rents here than to depress rents in Europe alone. This means merely that to the extent that the agricultural market is world-wide, so must also be the rent generalizations, if they are to be theoretically safe.

But neither in theory nor in fact does room for doubt remain as to the validity of the point at present urged. Improvements in transportation and in agricultural technique, improvements, that is, in the efficiency of human effort as applied to production, serve to reduce the pressure upon the land factor in production,—function, that is to say, as substitutionary rather than as complementary agents.

a disciplinary gymnastic. But this much, at least, stands forth clearly: Every problem in the dynamics of value, in its distributive aspect, must seek its solution along two lines of inquiry: (1) how does the new development affect the social dividend; (2) does the new development bear, as complementary good or process, to make relatively greater the demand for the instrument or agent under examination, or rather is the relation one of substitutionary good or process, summing up, that is, in the emergence of a new competitor, or, practically, in an increase in the supply of the goods under examination?

The bearing of education upon the various distributive shares must be worked out as in parallel with other developmental influences making toward increase in the productive efficiency of human effort; but allowance must be made for the different effects upon different grades of human activity,—the probable effect, for example, to lessen the differentials in favor of entrepreneur activity as against employeeship. And other effects toward increase in the volume and in the variety of consumption requirements would come in here for discussion.

A seemingly more difficult question is that of the probable future tendency in the rate of time discount. So far as the trend of things is toward an increasing social productiveness and an increasing per-capita share in that product, and thereby a diminished pressure of subsistence needs upon the individual income, it would seem safe to infer an increasing volume of deferred rights of consumption offering themselves upon the market. On the other hand, there appears probable a progressive development in the science and technique of industry. Temporarily, then, at any rate, the greater ease of saving may be offset, in effect upon the discount rate, by the increasing weight-and-tale productiveness of indirect methods of production.

But here again much depends upon the degree and direc-

tion in which improvements in technique express themselves in the form of substitutionary devices and instruments rather than of complementary instruments in relation to the general stock of instrumental goods. It is conceivable that knowledge of ways of getting on without capital should greatly limit the capital-goods field of investment for the loan fund.

So the increase of savings and the growth of capital goods might go so far, in directions substitutionary to particular grades or qualities of labor, as to depress the wages of these laborers even below the permanent subsistence minimum. But it is difficult to conceive how laborers in the aggregate could seriously suffer through any possible increase of capital instruments produced in the main by labor, unless, indeed, these instruments were of a sort to function with reference to labor as substitutionary goods, and at the same time, with reference to land, as complementary goods. In such case, manifestly, no difficulty could arise in any lack of supplies of consumption goods at human disposal, but only with the distributive titles under which the distribution would take place; rent would tend to absorb the entire social product. Parallel theoretical possibilities present themselves in connection with such developments in methods and devices as should tend to displace either capital goods or labor or both.

And there is possibility in many industries of monopoly organization going so far and so profitably, through the increase of savings and of capital goods by entrepreneurs, and through the decrease of consumption demand on the part of the laborers, and through the displacement of labor by substitutionary instruments, as to bring about either a progressive non-employment of labor, or an employment upon increasingly harsh conditions, and to bring about at the same time a tendency toward an increasing volume of consumption loans, represented either by an increasing volume of indebtedness from the non-capitalizing classes to the capitalizing classes, or, more probably,

an increasing resort to public debts both by the employee class seeking employment and by the capitalizing classes seeking avenues of investment.[6]

[6] But all of this leads up to questions falling within the problem of what has been termed the "fallacy of saving,"—upon which problem the present writer is disposed to confess himself sorely perplexed.

Ruskin, Robertson, Hobson, and Veblen seem to have done the best work here, not perhaps toward the solution of the problem, but to the development and definition of it. Surely, the ordinary "capital" talk, with its assumption that capital must be both concrete goods and relatively to labor complementary goods, is crassly superficial. And the whole subject is seemingly in intimate and intricate relations with the phenomena of industrial depressions. (See page 227, note.)

The truth may be something as follows:

So long as industrial technique will permit the utilization of new supplies of production goods, at results surpassing in service the displaced products or the displaced consumption represented by the intermediate appliances, so long private saving *may* be a clear advantage to *society as a whole,* but this only upon the assumption that the saving goes to the increase of productive equipment, rather than to private consumption loans, or to fiscal extravagance, or to the orgies of war.

But on what terms can any agency making for increased volumes of products render service to society? Only upon the condition that the products are to be consumed, upon the condition, that is to say, that the standard of consumption keeps pace with the increase in productive efficiency.

But even so, something may depend upon what classes of society do the consuming. Is it well that those classes receiving large incomes of purchasing power shall further capitalize to the indefinite increase of instrumental goods, or would they better consume?

Note that the question is not at all whether these disposable incomes were reputably earned, or were institutionally justifiable, or, on the contrary, were predatorially obtained, *or were better otherwise distributed,* but only whether, once obtained, and however obtained, they are, from the point of view of the other classes of society, better consumed forthwith by their recipients, or are better directed into the creation of new technological equipment.

We must, then, first inquire whether and in what degree technological capital may, in ordinary times, affect the distributive shares of other factors and claimants in production.

If it were true that, for whatever addition to product were due to the new instruments, an equivalent income accrued to the owners of these instruments, it would follow that other claimants could have no interest in the increase of capital. The problem is, then, in this aspect, a problem in the theory of distribution; for it is clear that in the imputation of distributive shares, the other claimants will receive some share of that product mechanically attributable to the enlarged supplies of technological goods. In this sense only, and by this method only, does the employer's capital benefit the laborers or other claimants. Any solution which directly deduces from the fact of an increasing social dividend made possible by capital, or from the fact of

But let it be assumed that an advance in rentals is to accrue to certain classes of instrumental goods, e. g., land; will this advance in rentals express itself in a higher per-

better tools in the hands of labor, a larger wage for the laborer, is a solution superficial in reasoning and inaccurate in conclusions.

Thus it is clear that such part of private capital as actually goes to the increase of productive equipment benefits the laborers, and other claimants, if and when the consuming disposition of society is keeping pace with its productive power; but this advantage is limited to what the technological equipment adds to product more than the distributive share imputed to the equipment.

It is then mostly or largely true that the capitalist's rôle is here only one of postponed consumption on terms of receiving later an increased volume of consumption. There is, however, in the total, an advantage to labor, so long as there is market both for its product and for the product of the extra equipment. But when and how far is there this market? Is consumption by the capital-owners and by the rich generally a necessary fact, if the volume of consumption is to keep pace with the volume of product? And when this is answered, what about the private capital which is unrepresented by technological equipment and the correlative incomes unrelated to increased product?

The question whether standards of consumption do commonly keep pace with productive power so that, commonly, no surplus productive equipment comes to exist, and the question whether standards of consumption must commonly thus keep pace, are distinct and separate questions. To the present writer it appears to be true that, excepting in times of post-crisis depression, the standards of consumption do now, in most modern societies, manifest the requisite power of expansion, but that there is no theoretical necessity for this; and it appears equally clear that in post-crisis times there is a distinct and disastrous restriction of consumption, with the result (1) that much equipment is temporarily a surplus, and (2) that in some measure there takes place in industrial processes a displacement of labor by capital goods.

And it appears to be true that the very fact that, through developing technique and increasing equipment, a high per-capita productivity obtains, with a large margin of average individual income over imperative individual need, explains how it may occur and does often occur that the volume of consumption varies, and that, through sharp restriction of consumption, industry is subjected to periodic reverses and to the periodic wastes, insolvencies, and starvations which bad times connote.

We seem, then, to have come safely thus far: that, from the social point of view, saving should neither go to the extent of subtracting from present consumption more in utility than is added by the later increase of output, nor so far as to increase the later product to the extent that the later consuming disposition will not absorb it; the limits of rational saving are, then, set by the prospective elasticity of consumption.

But now, precisely where, if anywhere, does this leave us with regard to the problem of luxurious consumption for those times when

centage ratio of time discount, or in a higher capitalized value with an unchanged rate of discount?

Such reply as may be given is neither precisely to the

the general attitude is one of overabstinence,—of overemphasis, that is, upon future consumption as against present consumption?

If in prosperous times the consumption of the rich displaces, in the main, only their own later consumption, it must be still clearer that any expansion of consumption in times of depression cannot be at the expense of the consumption of others. And obviously, if the luxury of the rich employs productive energies that otherwise would not function, such harm, if any, as can result to others must be found in the direction of influences peculiar not to luxurious but to ostentatious consumption, that is to say, not in the direction of any influence to restrict the absolute size of the incomes of others, but only the significance of those incomes. And if, in times like these, charity would be in any aspect justifiable, these luxurious expenditures have some obvious advantages over charity.

But what in such case are the economic effects of charity?

People who can find no work to do live somehow out of the actual product of industry, whether by the using-up of their own saved purchasing power, or by charity, or by loan. If we may assume that, through offered charity, their consumption is increased, and yet not at the expense of the consumption of others, but only with the result that more goods have been caused to be produced, it would appear to be true that the charity has meant added consumption for the recipients and added employment for others; and if, with their larger income, these others should be minded to increase their present rate of consumption, this industrial stimulus would be passed forward one degree.

The case would, then, stand as follows: by means of the substituted consumption of the recipients, an existing claim against the products of others has been collected in the present and canceled, instead of being postponed for collection and cancellation to the future; and the collection has taken place at a time when society has been able to achieve the cancellation through the employment of productive energies that otherwise would have gone to waste.

This argument, if valid—which is doubtful enough—means much for the methods and the times of the carrying-forward of public work. But even without the support of this particular argument, it should be fairly obvious that public improvements ought to be undertaken in times only of slack employment, and ought to be paid for in times of prosperity, rather than, as in present practice, carried on in prosperous times and on terms of displaced production, and paid for in times of depression.

But what does the argument imply for the social advantage of such savings as does not express itself in the increase of the productive equipment of society, but instead, flows into consumption loans or goes to finance fiscal deficits? Here nothing but condemnation is possible. Any private investment which, for any considerable period of

one effect nor to the other. The value of each and every instrument will be a capitalization based upon the current discount rate; but this discount rate will be the point at which all the savings in loan-fund form, the general-purchasing-power form, find a market among the various demands of borrowers for consumption purposes, for socially productive purposes, and for privately acquisitive purposes. The technological demand is only a part of the entire demand.

time, takes toll from social product by other title than of equivalent addition to that product is a socially disastrous thing. No matter what personal or moral justification there may seem to be, and as between man and man may really be, the case is, in last analysis, nothing but serfdom on the one side, and parasitism on the other.

CHAPTER XXV

THE ADJUSTMENT OF PRICE

Such examination of the psychology of utility and of valuation as falls within the sphere of economics to undertake has already been attempted, with something over. (See note, p. 307.) For present purposes it suffices that market prices may always safely—albeit superficially—be reduced to a problem of adjustment between the forces of demand and supply. But, even so, there remain some aspects both of demand and supply and of the process of adjustment still requiring attention.

For purposes of analysis and of exposition, the device of plotting demand and supply volumes into intersecting curves expressive, at their point of intersection, of the place and the method of market-price adjustment, has sufficiently demonstrated its claim to serviceability.[1] It is,

[1] Oddly enough, the general adoption of the plotting methods has not availed to remove the old-time ambiguities connected with the demand and supply notions. Potential demand, or excluded demand, and potential, or excluded, supply, are clearly brought out in the plotting device, as are also the respective relations to the actual and the possible adjustments of price. Nevertheless, the bad logic of the terminology which employs the concepts of demand and of supply to explain price and then defines demand and supply as derivatives of price, still abides. Ruskin's inspirational methods touched the heart of the case when he wrote, "The economists mean by demand 'the quantity of a thing sold.' I mean by it the force of a buyer's capable intention to buy. In good English, a person's demand is not what he gets, but what he asks for." (*Munera Pulveris,* chap. iii, "Ad Valorem.")

And so Pantaleoni:

"When price falls, a determined scale of wants being given, more consumers purchase; when, on the contrary, prices rise, fewer consumers purchase. Here we have to do with the extension or restriction of consumption in accordance with a *given and determinate law of demand*. But the extension or restriction of consumption is termed an extension or resfriction of the demand, which gives rise to endless ambiguities. By the use of the graphic method these ambiguities are avoided. . . . . The consumption, to speak accurately, or

however, at the same time true that the uses actually made of curves of utility and curves of demand have been prolific of much loose thinking,—this, for the most part, because of the lack of differentiation between curves of individual utility and curves of group or social utility, and between curves of individual demand price and curves of group demand price.

As referring to the individual, precisely what may demand or utility curves be made to express? As of any one time, and for any individual, it is undoubtedly possible to construct a curve of utility for all of the various items of a stock of precisely similar goods; but it is seemingly impossible, and it is certainly profitless, to attempt to include in the formulation more than one kind and one grade of goods. And with reference to any one kind and grade of goods, at any given point of time, a demand curve *in terms of price* is also easily possible of construction for the individual; and for any given point of time, a total-expenditure curve, expressive of the distribution of pur-

figuratively the demand, is extended or restricted; but it neither rises nor falls" (*Pure Economics,* Macmillan, 1898, pp. 148, 167).

Flux also is accurate in essentials:

"The state of demand may be really unaltered while the amount demanded [?] responds to changes of price quotations. Price change, in fact, leads to extension or restriction of the amount demanded, or, as is commonly said, of the demand, though this phraseology does not really describe the true nature of what is occurring" (*op. cit.,* p. 30).

The following, however, are examples of the more common but less defensible usage:

Seager: "The general law of demand is that it varies directly with changes in the intensity of wants, and inversely with changes in the prices that must be paid for goods. . . . . When demand increases or decreases readily in response to price changes, it is said to be elastic" (*op. cit.,* p. 66).

Hadley: "In any given market, the *supply* of an article, in its technical sense, is the amount offered at a given price. It tends to increase as the price diminishes. . . . . The *demand* for an article is the amount which will be taken at any given price. It tends to increase as the price diminishes. . . . . The market price for an article . . . . is the price at which the demand is equal to the supply" (*op. cit.,* p. 74).

Fetter: "In the case of any good . . . . a change in its ratio to other goods will increase the demand" (*op. cit.,* p. 29).

chasing power, in terms of some standard, among all the different grades and kinds of commodities is, theoretically, within easy accomplishment.

But for any group of individuals, a utility curve is, as we have seen, a hopeless impossibility. A group demand-price curve for any one kind and grade of article is readily attainable; and a group demand-price curve for commodities in general is also a possibility; but this last only in the sense that, as such, no curve remains, but only an aggregate market-price adjustment expressive of the price relations of all the different exchanging goods. All this, however, may require elaboration:

For any one kind and grade of commodity, the individual curve of falling utility per unit of commodity, as distinguished from a falling price-paying disposition, could have little or no significance as expressive of absolute utility magnitudes; not that some common denominator, in units of pleasure, or of satisfaction, or of desirability, or of choice, might not exist in the individual psychology; but, if existent, it could hardly be expressed, and, if expressible, could hardly be of service. The significance of the curve is in the expression not of the absolute utility magnitude of the different items of the stock, but only of their relative significance. The marginal item also could become only vaguely quantitative in meaning, quantitative in the sense merely of asserting a smaller utility than that of any other item in the series.

There is, therefore, no measure function anywhere expressed in the utility or marginal-utility analysis; the very fact that the series is a series, and that the law of satiation which it expresses implies that the items are of diminishing utility volume, makes each item incapable of serving accurately as the utility equivalent or measure of any other.

Nor, as we have seen, is it, with the individual demand-price schedule, possible to find a measure of utility in money. The limit of price offer expresses merely an

equivalence in utility between the thing in prospect and some foregone alternative. (See page 315.)

It follows that the total-expenditure schedule of the individual indicates not absolute utilities, but only what uses will be made of the individual's fund of purchasing power as against the competing claims of other desirable commodities. And no item of expenditure among all the items need be marginal in the sense of being at indifference between the actual direction and the alternative direction of purchase. The marginal unit of expenditure will be merely the lowest-service unit of all, without any necessary or probable implication as to the absolute size of it. Any attempted reduction for the individual of all the different commodities into one utility curve or schedule could, at best, be a mere repetition of the original expenditure curve.

But it can hardly be too many times repeated that, so far as concerns utility schedules, we can never get beyond the individual. Society can have no utility curves or computations, unless upon some heroic assumption—nevertheless possibly inevitable in socialism—that all men are alike, or, at all events, that their differences may or must be overlooked. As between different individuals, there can be no comparison of utilities either quantitatively or qualitatively.

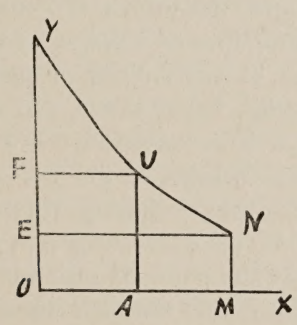
There may, however, be constructed for any one kind and grade of commodity a social or market price-demand curve, a curve indicative of the varying volumes of commodity marketable at the different prices set in the schedule. But neither for the group, nor for society as a whole, nor for any individual within the group is the price offer indicative of any absolute utility magnitude.[2]

[2] As forcibly illustrating this mixup between the individual utility curve and the individual price-offer curve,—between the possible individual utility curve and the impossible group or social utility curve, and between the individual demand-price curve and the group or social demand-price curve, Macfarlane's "graphic representation of the marginal-utility theory" (*Value and Distribution*, p. 37) is especially worthy of citation. "The utility of successive increments of commodity is represented by lines at right angles to *O M*. . . . . Ac-

The relations between the individual desire and the individual price-offer curve, and of both of these to the market-price-offer curve, require some further attention.

How much of today's fund of purchasing power, money or credit, shall a given individual turn toward the acquiring of wheat? Not merely the hunger of today, but the foreseen hunger of later days must be taken into the reckoning, as must also the expected future supplies of wheat and the expected future command of purchasing power, and over against all this must be examined the same

cording to the marginal utility theory, the value of the whole commodity is determined by the utility of the last increment of supply." So "*A U* or *M N* represent severally the marginal utility or *value per unit* of the commodity."



Accurately, this curve might represent the utility curve of any one commodity for any one individual at any given time, or it would serve for his price-demand curve, or for the price-demand curve of society as bearing upon any one commodity at any one time; but it cannot serve for utility curve and price-demand curve together, whether for some one individual or for society. A price-demand curve differs from a utility curve, where this latter is possible, in that the price-demand curve shows the effect of the desire for other things. Thus, even though the utility curves of several different men could be identical, there would be as many different demand curves as there were different men, and the demand curve of any one man would vary with different days, even though the utility curve might conceivably not do so. So, when Macfarlane is going to have *A U* or *M N* represent the marginal utility or unit value of the commodity, he is again confusing the possible interpretations of the diagram; he is really treating the curve not as a utility curve of any sort but as a social demand-price curve expressive of different volumes of purchasing disposition in view of the differing individual comparisons and decisions as to the respective applications of purchasing power.

total of considerations as bearing upon the competing claims of all other directions of expenditure. That is to say, a purely personal system of discounting future facts into bases of present activity must be applied over a wide commodity field, before the individual can decide, in any given case, whether he shall buy wheat or raiment, or rather hold for future occasions certain items of unspecialized purchasing power. Thus today's hunger-utility line, if it could be drawn, and today's price-demand line, as it can be drawn, must both be lines of steep descent, since the appetite for food, and particularly for any one sort of food, is quickly satiated. Not so, however, when the long-time aspect is included in the computation. As the needs of days ahead, or even of weeks and months, make themselves felt in thought, the price-offer line descends not at all so sharply; possibilities of storage, of decay, of ravages by vermin, as well as possibilities or probabilities on the side of future supplies, future needs, and future purchasing power, all are data in the problem. But in view of each man's situation and prospects, the law of satiety holds, and a limit comes to the purchasing disposition as reaching out toward wheat. This curve does not, however, find its lowest offer item at the point of satiation but at the point where some stronger pull attaches upon the purchasing power in hand. The items of price offer in the individual's wheat-demand schedule will therefore probably scatter themselves along at considerable intervals in the construction of the individual's general-expenditure schedule or curve, this last curve serving to express the same facts which, from another point of view, might stand as the individual's money-utility curve.

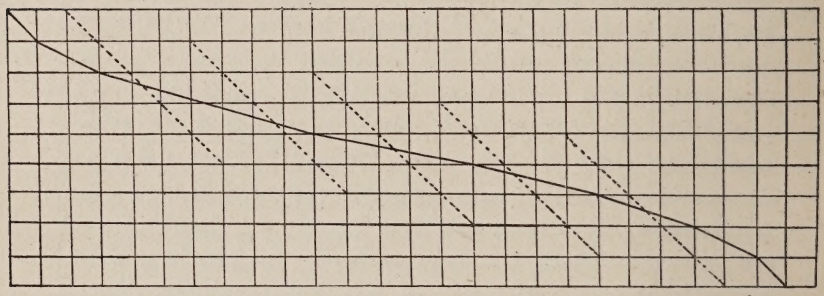
It is now to be noted that the individual's price-offer curve for any particular line of goods, and the individual expenditure schedule, are both worked out upon the assumption of a given price situation for each and every line and grade of commodity; very considerable modifications, therefore, in the amount of each commodity demanded, and in

the general distribution of purchasing power, might follow upon a change in the price of any single commodity. The action of each individual in the market is, as we have seen, to be regarded rather as the result of the market situation than as the cause, though each individual activity is in turn to be taken as part of the entire cause.

And out of all these individual offer dispositions, how construct the aggregate or social price-offer curve? This problem applies to only one commodity, and can refer only to the various amounts of this good which will be, under given conditions, purchased at different levels of price. And here again an existing medium of exchange and an established general level of prices are assumed. Precisely how, otherwise, the aggregate demand bearing upon any one commodity could be expressed or formulated, or even, for present purposes, described, is, indeed, hard to conceive; to the present writer, at least, the problem would seem hopeless. The solution for the individual case is clear enough, but is precisely of a sort that will not combine with other individual solutions in a way to render possible of construction an aggregate barter-demand curve. For, as has been already pointed out, each individual desiring to barter away any part of his possessions, and failing to find an opportunity to exchange the particular item to be sold against the precise thing demanded, will barter for such third sort of commodity as seems to him most likely to serve best as an intermediate; and it is not to this writer at present evident how these various lines of barter exchange and this multiplication of media could be made theoretically manageable in a market-value analysis. Seemingly each instance of barter would be a matter of separate bargain adjustment, modified only by the report of how similar trades were elsewhere being made, and also by each individual trader's opportunities and devisings as to some other possible roundabout method of achieving his ends.

The social demand-price curve presents nothing like similarity in direction to any of the individual demand-

price curves combining to make it. The individual price-offer curves of *A, B, C, D,* and *E,* say for bread, being assumed as respectively depicting price demands of 9, 8, 7, 6, 5; 8, 7, 6, 5, 4; 7, 6, 5, 4, 3; 6, 5, 4, 3, 2; 5, 4, 3, 2, 1, and as represented in plotting as lines of a 45-degree declension, would, as an aggregate demand volume of 9, 8, 8; 7, 7, 7; 6, 6, 6, 6; 5, 5, 5, 5, 5; 4, 4, 4, 4; 3, 3, 3; 2, 2; 1, plot into a group demand curve represented as follows:



The value equation requires a supply as well as a demand term; but it does not require the assumption of a produced or of an elastic supply. To make, therefore, still clearer the concept of demand, and to prepare for the introduction of supply considerations, let there be assumed an existing supply, truly, but a supply fixed and limited in volume, in the sense that all sources of new supply are taken as, for the time being, closed.

Nor is this an especially heroic assumption; the economics of child-trading approximates this case; and the situation among the reservation Indians after a general issue of supplies is a still closer approximation. How would demand present itself under this gift-supply assumption? And how would values adjust themselves?

Trading actually goes on briskly in these cases, and doubtless would do so, if confined entirely to barter processes; but the barter problem has already been sufficiently considered, and, even if capable of satisfactory analysis, would not afford an analysis serviceable for our existing

money economy. There is, therefore, also to be assumed an existing medium of exchange, a price standard.

Nor will it greatly advance our problem, the determination of the demand and of the price of any one article, to appeal to the proposition, obviously true for certain purposes, that the existing volume of commodities at any time is in one aspect demand, and in the other aspect supply, and that therefore any increase in the total supply is at the same time an increase in the total demand. The problem in hand is to determine what amounts of money or of equivalent purchasing power are, under all the conditions and influences bearing upon the situation, at present held to be expended for any given commodity at its various levels of price—what purchasing-power demands are now extended toward the commodity in question. All the different holders of different goods, the exchange prices of which are to be offered against the commodity under consideration, must be assumed as having transferred their various commodity holdings into the homogeneous purchasing-power medium, before any one of these possessors of commodities or any one of these commodities can figure as data in the analysis of the fixation of price. Our question is, what money demands center upon any selected commodity; we have no concern with demand and supply as aggregates in relation to the entire market for the total of commodities.

Each and every individual in the assumed group of five persons will be assumed as disposed to purchase some share of the assumed fixed supply, if only the price turns out to be low enough to attract him; each, that is, represents potential demand. Individual *A* will take one item if the price fixes itself at 9; five items if the price is 5; and evidently this disposition not to give more than 5 for the fifth item, or more than 6 for the fourth item, etc., expresses a situation which must obtain some further expression, were we to attempt the construction of demand schedules for other commodities. We have, then, a schedule of different purchasing dispositions at different price levels,—our

earlier schedule under a different statement; one item purchasable at price 9, three at 8, six at 7, ten at 6, fifteen at 5, nineteen at 4, twenty-two at 3, twenty-four at 2, twenty-five at 1.

Does this complete our demand schedule? Suppose a certain number of articles to be for sale; at what level will the price be adjusted? Here we must obviously take account of two different possible assumptions, (1) that the holders of the commodity will sell at any price that they can get, (2) that there are refusal prices.

Upon the first assumption, that of a demand schedule or curve expressing maximum price offers of 9, 8, 8, 7, 7, 7, 6, 6, 6, 5, 5, 5, 5, 5, etc., ten items of unreserved supply can be absorbed by the market only upon terms of a price as low as 5.

No such result will, however, obtain under the second assumption; here, obviously, the outcome must be a different one accordingly as different assumptions are made with regard to the reservation prices set by the various sellers. The truth is that a case falling within this second class is a case where the supply schedule really contains demand items; the seller plays two rôles. If two men, one with a price-offer limit of 30, and other of 10, want to buy a certain horse, for which the owner will refuse anything under 20, there are really three demand prices bearing upon the horse; the case is not that, on the part of the seller, of a willingness to sell at any price, in which case we should reckon only two demands, but is rather like that of an auction with an authorized bidder-in.

If now, together with our original price-offer schedule of 9, 8, 8, 7, 7, 7, 6, 6, 6, 6, 5, 5, 5, 5, 5, 4, 4, 4, 3, 3, 3, 2, 2, 1, it be assumed that the ten supply items are offered only as subject to a reservation schedule expressing minimum prices of 10, 9, 8, 7, 6, 5, 4, 3, 2, 1, and if also these reservation prices be transposed to appear as demand prices under the demand schedule, our problem will then present itself as one with an unreserved supply of ten items as over

against a demand schedule or curve of **10**, 9, **9**, 8, 8, **8**, **7**, **7**, **7**, **7**, 6, 6, 6, 6, **6**, 5, 5, 5, 5, 5, **5**, 4, 4, 4, 4, **4**, 3, 3, 3, **3**, 2, 2, **2**, 1, **1**. The price will then adjust itself at the point where the market demand will absorb ten items of supply, that is to say, at some price greater than 6 and not greater than 7.

The manner of market analysis especially characteristic of the Austrian school has, under the name of the marginal method, now established itself among practically all economists, although there remain different views enough as to the possible purposes which this analysis may serve. "In isolated exchange, exchange between one buyer and one seller, the price is determined somewhere between the subjective valuation of the commodity by the buyer as upper limit and the subjective valuation of the seller as lower limit." [8]

[8] *Positive Theory of Capital*, p. 199.

No one would be disposed to dissent further than to remark that Boehm-Bawerk has here shifted his subjective-worth concept over into a something derivative from the comparison of subjective worths—a true subjective valuation expressed in terms of price. *B*, the seller of the horse, and *A*, the buyer, work out the price-result by higgling. But it is worth while once more to urge that the case is more complex than it seems upon the face of it. What are these different subjective valuations? *A* is concerned not merely with the utility of the horse, but also with the utility of what he must let go in order to get the horse. *B* likewise has really two things in mind—the horse to be sold and the return therefor to be received. Evidently, there is present in the problem a medium of exchange, and tacitly and indirectly present a whole range of commodities into which the transferred medium may be exchanged. For ideally simple conditions, the case should be assumed as one in which *B* has only horses for sale, *A* only sheep, and neither *A* nor *B* the disposition, at the same time with the opportunity, to part with the property to be acquired. If, then, *B*'s supply of horses is such as to make horses a burden to him, while *A* is equally overstocked with sheep, the terms of exchange may be anything—thirty horses for one sheep or thirty sheep for one horse; there are no limits but those of skill in bargaining. But, directly it is assumed that each finds in both horses and sheep a utility for himself, there comes about a valuation by both *A* and *B*, not, however, a valuation by *B* of his horses or by *A* of his sheep in terms of some unrelated marginal usefulness, but a comparison by *B* of the marginal usefulness of his horses in terms of the marginal usefulness of the sheep offered, by *A* of the sheep in terms of the horses offered. That is to say, upon a basis of one marginal utility for each exchanger there can be no limit prices between which the exchange price must finally be found. Each trader

This explanation of value is based upon the assumption that, as the items of offer and demand become more numerous, the margin interval within which the higgling process may be operative is constantly reduced. A sufficiently minute gradation of both offer and demand is assumed—so near an approach to infinitesimals—as to justify the treatment of the selling-price as accurately a marginal price for both demand and supply. Admitting all the necessary attendant conditions, namely, that all the commodities are of equal desirability, all the competitors in the market simultaneously, and "that the buyers and sellers make no mistakes about the actual state of the market such as would prevent them from really pursuing their egoistic interest" [4] —assuming, in short, a perfectly frictionless market, this may be admitted as an accurate account, descriptively, of the market process; but it is another matter to assert that the point of adjustment expresses marginal utilities, or measures them, or is measured by them. As we have seen, two marginal utilities must be compared by each marginal trader—utilities must become marginal relative utilities—before a trader can become a marginal trader. It is still another matter to assert that these marginal traders are, as against the opposing in-pressing volumes of commodity and of purchasing power, the causal facts determining the ultimate price adjustment. It is yet even more questionable to assert that, while the market price coincides with the price limits of both marginal traders, the price is invariably determined by the price limit of only one—the buyer. All these questions really resolve themselves into the one great question, What are the causative forces in the market adjustment?

must be concerned with two marginal utilities, and must have based his subjective valuation upon the outcome of this comparison. It is only upon these conditions that *A* can set his minimum offer at ten sheep for one horse, or *B* determine, as his limit, to accept five sheep for one horse, and the price limits be declared fixed at ten to one as upper limit and five to one as lower limit.

The importance of the further assumption of an exchange medium and a surrounding commodity market is now sufficiently evident. To say that *B* will accept fifty dollars for his horse, and that *A* will, as limit, give sixty dollars, is to say that *B* prefers as against the utility of the horse the things which fifty dollars will purchase, and that, even as against the utility of the things that sixty dollars will purchase, *A* prefers the utility of the horse.

[4] *Positive Theory*, p. 204.

The illustration—quoted from *Positive Theory*—of isolated exchange has already received sufficient examination. No talk of determination of price by margins or at margins, but only between margins, can be made for this case.

Consider now the illustration of competition confined to the selling side. If A is the only buyer, with 30 as his price limit, and if together with B, with a minimum price of 10, there are other items of supply, B_2 at 12, B_3 at 15, B_4 at 20, and B_5 at 25, the price must be made at somewhere between 10 and 12 as the limit.[5]

This second case gives little support to the theory that the price adjustment either expresses a demand price or is limited in either direction by demand margins. Both the upper and the lower limits are fixed by offerers' prices.

It appears, indeed, that only where, at a certain minimum of price as set by supply, the demand items outnumber the supply items, can a demand schedule furnish both price limits; but cases of this sort are presented only in the one-sided competition of buyers:

"Assume now that, in addition to A_1 and A_2, three other buyers, A_3, A_4, and A_5, compete for the horse, and their respective circumstances are such that they count the possession of the horse equivalent to 22, 25, and 28, respectively. . . . . A_3 will bid to the limit of 22, A_4 to 25, and A_5 to 28." [6]

Thus at 28 A_1 and A_5 would close, so A_1 must pay a price somwhere between 28 and 30.

TWO-SIDED COMPETITION

Buyers

A_1	values	a	horse	at	30,	and	would	buy	at	any	price	under	.....	30
A_2	"	"	"	"	28,	"	"	"	"	"	"	"	.....	28
A_3	"	"	"	"	26,	"	"	"	"	"	"	"	.....	26
A_4	"	"	"	"	24,	"	"	"	"	"	"	"	.....	24
A_5	"	"	"	"	22,	"	"	"	"	"	"	"	.....	22
A_6	"	"	"	"	21,	"	"	"	"	"	"	"	.....	21
A_7	"	"	"	"	20,	"	"	"	"	"	"	"	.....	20
A_8	"	"	"	"	18,	"	"	"	"	"	"	"	.....	18
A_9	"	"	"	"	17,	"	"	"	"	"	"	"	.....	17
A_{10}	"	"	"	"	15,	"	"	"	"	"	"	"	.....	15

[5] *Positive Theory*, p. 201.

[6] *Ibid.*

Sellers

B_1	rates a horse at 10, and would sell at any price over	10
B_2	" " " " 11, " " " " " " "	11
B_3	" " " " 15, " " " " " " "	15
B_4	" " " " 17, " " " " " " "	17
B_5	" " " " 20, " " " " " " "	20
B_6	" " " " 21½, " " " " " " "	21½
B_7	" " " " 25, " " " " " " "	25
B_8	" " " " 26, " " " " " " "	26

"At any price over 20 only six horses are demanded and five offered. . . . . The solution becomes essentially different when the rising bids have reached the limit of 21. At that price A_6 is compelled to cease bidding, and there are now only five sellers against five buyers. . . . . The bargain may be concluded at the price of 21." But at the price of 21½ "there would be a sixth possible seller in the form of B_6. . . . . The limits within which the price must necessarily be determined are narrowed to 21 and 21½." [7]

But meanwhile observe that, though in an isolated exchange, B and A get at the terms of sale by higgling, and though, in the case of the one seller B, in face of A_1 and A_2, the price is fixed by the bargaining of B with A_1, it is a hazardous step to conclude that any similar pairing-off can obtain under the two-sided competition of the ordi-

[7] *Positive Theory,* pp. 203–206.

Recasting the problem so as to make reservation prices appear in the demand column, the supply schedule stands as eight items for sale without reservation as against offers of 10, 11, 15, 17, 17, 18, 20, 20, 21, 21½, 23, 25, 25, 26, 27, 28, 30. The price outcome is, of course, the same as before.

It is worthy of note that this view of supply as having also a demand aspect and as leaving both the upper and the lower price limits to be furnished from the demand schedule affords scant comfort to the demand school of value, since it remains true that the number of items in the supply schedule must determine between which limit pair of demands the price shall finally settle. Otherwise than by somehow showing that the volume of the supply schedule is itself to be traced back to demand forces and explained by them, the demand point of view fails to make out its case.

But, in whichever manner the problems are analyzed, it is evident that no warrant has yet been given for asserting the paramount importance of either demand or offer in the determination of price. Admitting that for cases where infinitesimals have excluded higgling, "we now see that every market price is a marginal price" (*Positive Theory,* p. 209), the existence and origin of any one determining force must still be held in doubt. To justify the Austrian interpretation, supply has yet to be resolved into demand.

nary market, no matter how idealized may be assumed to be the conditions. It can hardly be true that, in order to reach the price adjustment, any particular individuals must get together; yet our rationalized schematic narrative has it that the least anxious actual buyer who would pay 22, if necessary, and the least anxious actual dealer with his limit of 20—the marginal bargainers—arrange the price adjustment through their skill of fence in the bargaining process. They certainly need not; all that the perfect market assumes is that such a price be reached as shall leave no one having the willingness to sell below the price to cry his wares without a purchaser, and as shall leave unsupplied no purchaser who would yet take the commodity at any slightest fraction above the price established. The price which will fulfil these conditions may be established in no matter what wise; it is sufficient that it will not be disturbed. The chances are evidently thousands to one that the marginal traders will not get together to higgle, and it is by no means clear that these are the traders of especially marked disposition to higgle. That they are the most indifferent of all, in point of the volume of quasi-rents at stake, may not indeed fairly imply that they are the least interested in the particular penny or two to be contended for; but in actual fact not the number of pennies at stake, but the kind of people playing for these pennies, will mostly determine who will do the higgling and how much higgling will be done. Women of the shopping and bargain-counter mania deserve especial attention in this connection. There is no sufficient reason for supposing them to be purchasers at or near the margin of indifference.

And, even were it true that the traders nearest the margin chiefly do the higgling, their activity could be effective in setting the last touches to the price adjustment only so far as they were assumed not to be marginal. It is of the essence of the theory that in a perfect market higgling is not a force to modify the outcome; and, even upon the assumption of an inter-marginal area, it could be only within this narrowest of limits and as putting, so to speak, a fine edge on the price that bargaining could avail to fix the terms of the exchange. Certainly, in the broad view, these marginal or quasi-marginal bargainers are the results of the price limit, and not the cause of it. The marginal item, whether of demand or supply, differs from any other item only that through it as marginal increment

a determination may schematically be made of just what effect it, or any other single item, has had upon the price adjustment, measurement being made from the point at which all the other forces in the market would otherwise have left the price. Not to the soldier who fires the last gun is the victory to be accounted, nor is the smallest boy who touches off a fire-cracker to be held responsible for the Fourth-of-July hubbub. If there is truly a marginal buyer, the marginal price must coincide with his valuation; but neither the point of adjustment nor the buyer at this point is the determinant of price. This buyer is the least forceful among all the buyers. True it is that, if he were not in the case, the price would have been other; but so is this true of all other buyers. The marginal demand is one among the whole number of demands, and as such has its part in the resulting adjustment; but it is the entire demand in equilibrium with the entire supply which gives this market adjustment. Almost as well talk of the child who chases the wave up and down the shingle as fixing the wave-front.

For most purposes the marginal traders are observers. It is true that their added weight in the market may move the price from one margin to another, but the basis on which they build or to which they add is made by thousands of other demands in face of thousands of offers.[8]

[8] That this needs saying is evident not merely from numberless cases of careless statement—some of the present writer's among them—but from cases where the marginal doctrine is made the basis of really absurd conclusions:

"At first sight it may appear strange that so few persons, and those so little conspicuous, should decide the fate of the whole market; but on closer examination this will be found quite natural. If all are to exchange at one market price, the price must be such as to suit all exchanging parties; and since naturally the price which suits the least capable contracting party suits, in a higher degree, all the more capable, it follows quite naturally that the relations of the last buyer whom the price must suit, or, as the case may be, the first buyer whom it cannot suit, afford the standard for the height of price."—*Positive Theory*, p. 213.

"We may go a little farther, and affirm that, so far from the money demand proper being the regulating demand, in the adjustment of ratios between the precious metals and other commodities that money demand can hardly ever be the regulator. . . . . [It] can hardly ever be that last margin of demand to which the last margin of supply is adjusted, and by which the ratio of exchange between the precious metals and other articles will be finally settled."—Giffen, *The Case against Bimetallism*, pp. 94, 95.

The fact appears to be that the marginal method of analysis is of very limited application as an account of the concrete facts of industry, and is of even less value as a statement of causal sequences. As a thoroughly rationalized statement of that which never remotely approaches the rational—as a formulation of the logic implicit in the market—it has, in some directions, an important function in economic investigation; but it says merely that, with the various occasions of friction eliminated, with *things different in degree merely*, the forces and tendencies of the market would work out in conformity with the illustrative scheme. It has nothing to say as to the nature or causal interplay of these forces.

This is in no sense to deny the important service of the marginal method, but rather to define and limit its purpose. Only by such close analysis of what is characteristic in marginal relations does the ready and sensitive response of value to market influences become intelligible, or a rational and detailed account of the ultimate relations of demand and supply to each other, and of both to market prices, become possible.

Precisely as demand at any given time must include all the purchasing dispositions in possession of money or of equivalent purchasing power translated into terms of money —credits, deposit rights, goods appraised in terms of money —so the supply schedule, in whatever manner it is formulated, must allow for all the commodities for sale on any money-price terms. As an intermediate step in the elucidation of the price problem, supply no more than demand is to be formulated as a derivative from the price adjustment.

And here we may stop to question whether anything is really gained by distributing into the demand schedule the demand elements hidden in supply. Is the price adjustment thereby made either more intelligible or easier of manipulation?

Probably not; no preference is urged; it is only when, presently, under cost-of-production influences, the supply volume of any particular commodity is to be explained, or when an analysis is attempted of the influences by which

the volume of supply will, with passing time, be modified, that theoretical significance attaches to the proposed recasting of the demand and supply schedules.

But it remains true that, speaking generally of modern entrepreneur production, goods when once produced are sold for what they will bring; which really amounts to saying that in the main the practical significance of all reservation prices must be sought in the field of costs.

For it now becomes necessary to attempt some account of the bearing of cost-of-production influences upon supply. All influences tending to restrict the relative output of any commodity express themselves in the entrepreneur computation as cost influences of the most unquestionable sort; and chief among these are the value-productive opportunities open in other lines of production.

But, in point of fact, inasmuch as cost of production is purely a computation of the individual entrepreneur, there is hardly any limit to the influences that may bear to cancel or limit his production; but each such influence, by the very fact that it is supply-restricting, is the basis or the expression of a cost; whether it applies to one or to many or to all lines of product is irrelevant to the present purpose. No individual entrepreneur knows or cares as to the effect upon the relative volumes of different supplies. Possibly enough, the hazard or the tedium, or the ill repute, or the time discount, or the rent, may in other industries be equally as serious burdens as in the line of production pursued; but there is, in any event, the alternative of non-production. The only cost-of-production question is, then, what remuneration must be received to maintain the output. This remuneration must be sufficient to keep the producer from deserting his line of production for another line, or from retiring, entirely or in part, to leisure. Thus the cost margin may be one of change of product or of restriction of product or of retirement. But, in any case, cost is the money statement of the necessary compensation.

Superficially viewed, there is, however, apparent force in the doctrine that all such burdens or expenses—if any such there are—as are common to all industries, could be omitted from cost computations, not as excluded from cost, but as irrelevant to relative costs; for, after all, it is, in the broad view, true that cost as bearing upon value must be cost in the relative sense. And it must be admitted that it would be possible to regard entrepreneur qualities, capacities, conditions, and preferences as the sole variant influences upon cost, taken in this relative sense, were it not for the fact that the different industries vary greatly in their technique in respect to the relative call for one productive agent or class of agents as against another. So were all industries alike in this respect, or, so far as the technology of production were concerned, were the different agents and instruments practicably interchangeable at their established price levels, so that no agent or instrument could be in relatively short supply, their could remain no basis for variations in the relative costs of commodities, other than through such differences as depended strictly upon differences in entrepreneurs.

As the outcome of this discussion—more or less repetitious,—we arrive at a clearer view of the relation of costs to value and of the ultimate determinants of value as expressing themselves through costs. Taking entrepreneurs as they are, with all their differences, and as competitively operating under given and common conditions of technological development, and placing these entrepreneurs, with their different abilities and adaptations, over against the conditions of human needs and wants on the one side, and over against the existing supply of instruments and the actual limitations and conditions upon the supply of these instruments, on the other side, we have a full explanation for the relative volumes of products and for their respective market prices. Cost of production is merely the entrepreneur computation under which these

underlying forces and conditions exert their determinative influence upon the relative volumes of products.

Cost, then, is to the entrepreneur something more than a return for the outlays of production, often something more also than a personal justification for activity as against idleness. The producer must in most cases also justify his occupation against any other line of gainful activity open to him. As bearing upon price, cost is, we repeat, nothing more than the inducement, expressed in money, necessary to the bringing-forth of product. The search for the maximum price remuneration for the productive energies and opportunities at one's disposal discloses what is commonly the most important element in cost in any particular line of production.

Or, again, cost may be stated as the refusal price below which, as a margin, the advantages of some alternative of production or of recreation will tip the scales of choice. Taking account, in this refusal price, of its most important constituent, the relative advantages of some other line of employment, the compensations held forth for the ministry to other demands, supply takes on a distinctly dynamic aspect; it is no longer an inert or passive fact as the recipient of demand, and as having the capacity to affect value only as it satiates demand. It has rather the aspect of a resistance, since it is, in large part and in the relative computation, almost solely the expression of demands in other directions.

If it be granted that the supply schedule is equally a demand schedule, the futility of the contest between the utility school and the cost school becomes apparent. Each of the contestants will have to make room for the other, with both elements recognized as dynamic in precisely the same sort. Relatively speaking, however, the demand schedule is, doubtless, a fixed one. However fully, then, the primal and causal nature of demand be recognized, there is much to say for the view that, given man as he is, with his equipment of desires and tastes and habits and

customs, modifications in price are most profitably studied from the point of view of variations in the supply term. Diminishing relative costs now here, now there, are the characteristics of a progressive economy; the proximate causes of modifications in value are, therefore, to be found in those changes of productive processes which, by diminishing the relative cost of particular commodities, expand their supply. A better process implies simply that per unit of product it is now necessary to divert a smaller total of productive forces from other lines of production. Prices fall until the rising curve of product cuts the falling curve of price at a new equilibrium point of compensations. Productive energies and the derived remunerations distribute themselves in view of the marginal urgency of the different demands. But the more clearly, then, is it an inadequate formulation to say that the market, having become overstocked at the old price, the increased supply makes it necessary to make sale connections with wants of lower intensity—that the larger supply has, so to speak, uncovered lower levels of demand, so that the market price is still the marginal demand price of the newly attracted purchasers. Doubtless so it is, but it is equally the marginal supply price. Neither the relative-marginal-utility-demand items nor the marginal-utility-supply items can be, either alone or in conjunction, taken as fixing value, but only as commensurate with value.

CHAPTER XXVI

DISTRIBUTION

Fundamental to all problems of costs, and, indeed, to all aspects of distribution, is the problem of the fund or quantity of goods to be distributed. What is the *distribuendum,* the group or social dividend?

Suppose Farmer *A* to have succeeded during the year in covering his living expenses and to have added $500 to the value of his farm; what is his income, $500 or $1,000?

Mr. Cannan stands for the view that within income must be included (1) the things enjoyed, (2) the increase made in personal capital, the $1,000 solution.[1] Professor Fisher, on the contrary, insisting that income is strictly to be distinguished from capital—income being taken to consist purely of psychic services, the flow, while capital stands solely for the fund of possessions from which this flow is derived—holds that the $500 of improvement added to the farm is really not present income but rather the postponement of present income, and that the increase in the value of the farm is merely the present worth, the capitalized value, of a prospective increase in income.[2]

For the purposes of the present discussion, Professor Fisher's view appears to be the better one; human affairs may, if one likes, be regarded in two aspects, on the one side, the appetitive side, an analysis of human desires for valuable services, on the other side, an investigation of the productive processes and the distributive forces under which these desires reach their more or less of satisfaction. Consumption is the final goal of production, psychic income (utility) the ultimate significance of the production-distribution process. If by drouth or fire or murrain and before any

[1] *Economic Journal,* Vol. VII, p. 284.

[2] *Ibid.,* pp. 534, 535.

enjoyment had accrued, our capitalizing farmer had seen his improvements canceled, they could not be held to have furnished income, in any sense with which ultimately the distribution problem is concerned.

But how about the products of the farmer's kitchen garden, making part of his $500 of "living" supplies, or about the eggs and butter produced and consumed upon the farm, and, generally, about all those commodities and services which might have been, but were not, marketed?

Or how about the fresh air breathed and the fine views commanded and the neighborhood privileges enjoyed upon the farm—all facts controlled and appropriated under the right and title of the farm ownership, and all in their share contributing to its command of those rental incomes, of the long series of which the value of the farm stands as the capitalized present worth? Is it necessary that a potentially marketable fact pass through the market crucible, before this fact can stand as an item in the social *distribuendum?*

And what shall be said of the housewifely activities of the women folk at home, their errand-goings and slipper-bringings and nurselike ministrations? Are these to be accounted unproductive merely by the fact that they are not, in any usual sense, paid for? And if productive, what is the relation of the product to the national dividend? What also about the labor of the domestic servant? And how exclude this, without applying the same rule to the efforts of the actors, teachers, and preachers? Or is the line of distinction still this one of appearance or non-appearance in market exchanges?

And, theoretically, these are far from being the most serious difficulties. If it be agreed that, even at the margin of withdrawal, work may be pleasurable, and yet be abandoned at the point where the pleasure of the activity, plus the pleasure from the product, is outweighed by the advantages attaching to other pleasant work or to leisure, where, then, shall be drawn the line between work and

play? Shall it be said that anything is work which is done with any slightest regard to the resulting product, and that only that is play which is done purely and solely for the very joy of the activity? This is probably the more common formulation; but what is *product* for the purposes of the case in hand? If one hires someone to play the violin for him, the activity of the player is clearly productive; that is why it is paid for. And if gratuitously rendered—a gift of service—is the playing thereby to be regarded as the less a service and the less productive? And why is not equally productive the act of playing for oneself? Is the distinction purely in the fact that in this last case there is no external and marketable somewhat? Or is the distinction merely one of the degree of roundaboutness of the path by which the service arrives?

Surely if one spend some days in making a violin, later to be used for one's self-amusement, the process of making must be accounted productive. Is the distinction then between the productive and the unproductive one of externality of result? or of roundaboutness? If one apply himself to grievous study in preparation for the making of violins, this must be regarded as productive effort, unless, indeed, the denial rest upon the fact that as yet there are no external results, the study being regarded rather as a preparation for producing than as actual production, and the skill rather as producer than as product, and its remuneration rather as wages than as interest.

But would it at all matter for the purpose, were the study a preparation not to make violins for oneself, but to play violins to oneself? In economic usage, it is difficult to call this sort of preparation *work,* but in any lay sense of the term, difficult to call it anything else. But, clearly enough, no product has yet manifested itself, of a sort to rank as a psychic income, or to function as rent or hire or wage with relation to the aggregate product to be distributed. It seems, then, that not all desirable results fall within the dividend concept.

Possibly another line of approach to the problem will better serve. Leisure and recreation cannot altogether be excluded from the field of economic reasoning, since they rank as among the costs setting a limit to productive activity; not merely the outlays of production, but the pains of production, and likewise the pleasure displacements of production, are facts affecting the money recompense required to induce production. That is to say, recreation wants are value-affecting influences to be taken into account in the computation of costs.

All this, however, does not involve the inference that, *from the market-value point of view,* recreation is productive. Recreation never looks toward marketable product, and is therefore irrelevant to market value, otherwise than in this aspect of cost. In the *market-value sense,* at any rate, it is not productive.

But how, from the individual point of view, say, in the Crusoe reckoning? Shall basking in the sun be, from this point of view, accorded productivity, even though it be a productivity without activity? Plainly, the result is a satisfaction, a utility, a psychic income. What does it signify in Crusoe's economic life—his *wirthschaftlichen Leben*—whether or not somewhere in the process an external fact presents itself? The truth seems to be that basking in the sun and every ordinary sort of play can fall short of economic quality not by any test of externality, but only by the fact that free goods are not economic goods; they need no economizing. In the economic sense, the production of free utilities is not production at all. So if, aside from any market aspect of the case, violin-making were an enjoyable activity—a costless process, it could not become economically productive by the mere fact that a desirable thing resulted from it, any more than the playing of the violin for self-amusement becomes productive by the mere fact that it gives amusement. No matter how greatly prized mud pies may possibly be when once they are made, they are not thereby economic goods—and this, simply because they are

free—costless—goods; one may have them to the limit of his desires, exempt from all conditions of burden.

But again, what if the case be one where the recreation is really appreciated as a costly thing, as displacing some valuable product which, but for the overbalancing claims of recreation, would have been produced? In this case, the recreation must, it seems, be accepted as a productive fact; the resulting good is no longer a free good but a good obtained on terms of conscious sacrifice. Many a man foregoes an outing, not solely as a question of the expense of the trip, but in part because of the attendant suspension of earnings.

And surely the pleasure that, in any way, one pays for has a value; it is, indeed, the essential characteristic of all *valuable* psychic income that, in some sort, it costs to get it.

We conclude, then, that much that is called play, and much that is ignored, either as unproductive or as irrelevant to market-value computations, must, in the individual psychology, be held to be productive, and that only such activities are, in the individual reckoning, unproductive as are, in the actual thought of the individual, held to be costless.

This conclusion receives corroboration from the fact that where another plays the violin for your pleasure, and yet does it without charge, the naïve common-sense would rank the case as neither more nor less productive than is one's own activity for one's own amusement.

But to declare an activity productive, whether individually or socially, is not precisely to establish its product as an item in the social *distribuendum*. Not all product is implicated in the distributive process; there is much productivity against the result of which no competing and conflicting claims on behalf of co-operating productive factors can attach, or, at all events, do attach, and which has no other relevancy to the distributive problem than is implied

in the fact that the production of it may have had some bearing to restrict the quantum of distributive goods.[3]

Regarding, then, the social dividend as made up solely of products ripe for consumption, and as including not all of these, but only such as, either by the conditions of their production or by the manner of their consumption, come to be involved within the distributive process, we are now concerned to note that all consumption goods ripening to service within the economic process, as distinguished from crime, or warlike foray, or other non-market predation, fall to their recipients under the guise of economic income. But not all incomes are received by title either of independent production or of co-operative contribution to production. If we are to render any adequate account of the forces determining the apportionment of the social *distribuendum,* it will be necessary to explain the actual distribution of purchasing power in society. This the productive-distributive process is adequate to do only in part. And productivity of income is something other and more inclusive than mere technological productivity, present or past. Goods for consumption are acquired through the possession and offer of current purchasing power; and this in turn may have been acquired by inheritance, by gift, by speculation, by gambling, by stealing, as well as by title of

[3] It would be hard to decide whether the net result of this discussion is concurrence in the prevailing doctrine or divergence from it. So far as the present writer is aware, surprisingly small thought has been directed to making the social-dividend concept precise. The discussions of Cannon, Fisher, and Fetter bearing upon the concept of *income* are both pertinent and illuminating for the purposes of the problem; and yet—as it seems to this writer—the social dividend is something appreciably smaller than the aggregate of all individual incomes. Smart (*The Distribution of Income,* chap. xi) has discussed with great acuteness some aspects of the question, and concludes not only that the work of the housewife is productive, as it surely is, but that the product is to be included within the social dividend. It is, then, evident that the view here taken goes farther than the prevailing opinion in extending the notion of productiveness, at the same time verging toward extreme restriction in deciding what share of the aggregate product is to be included in the *distribuendum.*

having produced, or of having helped produce, a valuable commodity. For, in truth, not merely the distribution of the landed and other instrumental, income-commanding wealth in society, but also the distribution of general purchasing power and of rights to wield and direct the application of general purchasing power, are, at any moment in society, to be explained only by appeal to a long and complex history, a distribution resting, no doubt, in part upon technological value productivity, past or present, but in part also tracing back to bad institutions of property rights and inheritance, to bad taxation, to class privileges, to stock-exchange manipulation, political favor, legislative and administrative corruption, pensions, tolls, royalties, perquisites, patents, interest on public loans, interest on consumption loans, and, as well, to every sort of vested right in iniquity.

And some of these mere rights of tribute come to be included in the production process, and to rank there as valuable market advantage or opportunity to such individuals as control these rights, e. g., business blackmail, royalties on patents and processes, tolls, transportation impositions, and the like. But there being no apparent method of bringing this class of facts within the orderly sequences of economic law, we shall—perhaps—do well to dismiss them from our discussion, merely stopping, however, to note that the incomes upon them—to the extent that these incomes are so far vested as to promise future revenues—are capitalized under the discount principle, are salable like other acquisitive goods, are wealth for all individual ends of gain or of social prestige, and carry with them the right to participate in the enjoyment of the social product.

But none the less is there a distribution by right of productive contribution. And under this title must, among other things, be discussed the compensations allotted to human labor and human supervisory activity, as wages,

salaries, and profits,—to the owners of instrumental goods, as rents, and to capital-owners, as time discount upon wealth in its time aspect.

But in order that the difficulty of the distribution problem be not exaggerated or its importance disparaged, recourse must be had to the principle that production precedes and conditions and limits consumption, and that therefore the production-distribution process logically precedes and theoretically underlies all such other distribution influences as have no basis in productivity rendered, and as modify—even profoundly—the ultimate apportionment of consumption rights. Interest received upon public war loans is of this secondary-distribution sort; so pensions, sinecure salaries, subsidies, profits upon corrupt contracts, and not a few of the secondary effects of taxation.

The chief theoretical difficulty in the subject is, indeed, to draw the line between this primary and this secondary distribution, and to make allowance for the mutual interactions; for example, consumption loans, by affecting the supply of funds for loan in productive directions, exercise an influence upon the discount costs of production. Such taxation, also, as can be appreciated by the contributor as falling upon his productive process rather than upon his consumption, are treated by him as production costs. Taxes also which burden a distinct line of raw materials function as cost items in particular industries. And taxes which burden distinct lines of consumption, and thus disturb the relative volumes of consumption goods to be marketed, may superficially appear to have no further effect than to redistribute the productive energies of society, but, nevertheless, by modifying the relative hires of productive agencies, do appreciably disturb the distribution of purchasing power in society. Privately achieved or publicly granted monopolies of production, patents, process royalties, trade secrets of method, and any exclusive control of sources or of methods of supply—all command rents, and thereby affect the distribution of purchasing power; and, on the other hand,

the opportunities and advantages paid for under the form of these rents hold the same relation to cost of production as are held by land and other instrument differentials of advantage; these costs, in turn, are mostly passed along under the guise of enhanced market prices, and are ultimately mainly a burden upon the consumers of the goods, whereby, again, redistributions of purchasing power are initiated.

Monopolies or privileges of sale—as distinguished from those of production—function in this regard like taxes upon consumption. Transportation charges, whether justifiable or predatory, also operate like taxes, and are production costs or mere consumption tribute accordingly as the original incidence is upon production rather than upon consumption; but in either case the final burden rests in most cases and for the most part upon consumers.[4]

The broad principle for all problems of cost of production is, however, that any outlay or sacrifice for a differential opportunity, whether this be a mere permit or a license, or be attached to the possession of some agent or instrument of production, is a cost. For, as we have seen, any production cost is merely another way of looking at what is, from another point of view, a distributive share in the product. But that all agent or instrument hires are costs is far from saying that they include all costs. The technological point of view, which sums up costs as a total

[4] From this reasoning if accepted as correct, applications of very considerable significance may be made to important problems in the theory of taxation and to the general principles upon which import duties should be levied. So also the merits of the competitive organization of society should therefrom receive some illumination. But all this would be aside from our main purpose of realistic description and theoretical analysis. It must here suffice to note that such imperfections as, from the present point of view, are incident to the competitive system refer not so much to the processes and the results of the primary—the production—distribution, as to the political and property institutions under which the secondary distribution takes place, and to the modifications of the primary distribution due to reactions upon it from the secondary distribution. (See in this connection note, p. 565.)

of wages, interest, rent, and profits, is in its general acceptance little short of astounding; for even if taxes, insurance, advertising, and like outlays may finally be traced to labor or capital-goods bases,—which, by the way, is not a simple matter with, say, taxes to pay interest on war debts—it is, at all events, clear that these are not outlays for labor or capital as technological factors in production. The tripartite, or any other technological classification of productive factors, must be especially misleading for purposes of the entrepreneur-cost computation.

And once again must it be repeated that the mere fact that cost-distribution shares are received through the entrepreneur as intermediary, does not imply either that no part of the entrepreneur remuneration, profit, is cost, or that all of it is cost. For it is precisely at this point of entrepreneur remunerations that costs and distributive shares fail of coincidence. All of the entrepreneur remuneration is a distributive share, but only for the marginal entrepreneur, or only for the marginal items of each entrepreneur's production, is all of the compensation cost. All quasi-rents of entrepreneurship, all unnecessary or supra-minimum profits, are distributive shares falling outside of costs.

But this does not mean that all occupation or instrument-employment differentials above the next most attractive opportunity are non-cost facts wherever found. Cost is an entrepreneur reckoning; the entrepreneur knows what hire in the actual employment competition forces him to pay; but he cannot know, and he need not care, what hire in some other employment the agent or instrument might command. For competitive purposes, occupation differentials are non-cost facts only for those individuals who receive the hire of them and to whom it, at the same time, falls to compute costs. It is the entrepreneur alone whose occupation differentials fulfil both these requirements. The self-employed laborer—entrepreneurship at its simplest—computes his costs as the money state-

ment of his best alternative line of conduct, whether this be one of independent production, or of wage-earning, or of leisure. The employee might—but without any bearing upon market cost of production—compute for himself in what degree his compensation was greater than an equivalent for his pain, or greater than his wage under another employer, or in another industry. And so, with equal irrelevancy to any market-value problem, might the land-owner compute what his rent as actually received was greater (1) than that which he himself could make out of the land, or (2) than another in the same line of production would pay, or (3) than some tenant in some other line of production would pay. Or a collectivist society could properly compute as its land cost of any given product only the displaced alternative products. But the entrepreneur must compute as his cost not what he would pay if he paid less, but what he does pay, as compelled thereto by all the facts of the situation.

Land worth 100 as wheat rent but only 90 in its next best use would permit, for collectivist computations, only 90 of cost; in a competitive society, this land will pay its owner in rent 10 more than it could command in any other line of production, and may, under the actual tenant, pay the owner 1 of rent more than any other tenant could or would pay. But since the land costs the cultivating tenant 100 of rent, it is a 100 cost for him.

This does not carry the cost computation to its closest approximation to accuracy, though even at its closest, something, as we have seen, must commonly be lacking to the entire accuracy of the productive imputation. If the actual renter at 100 is conscious that he could, in another line of production, make the land count him for 102 of return, the while that it is actually paying him 103 in wheat, he must compute against its actual productivity of 103 a cost not of 100, the rent outlay, but of 102, the foregone opportunity. His cost, so far as it is a land cost, is in his best foregone alternative; in the case supposed,

this best alternative was not to keep his money in his pocket. The necessary price to induce the production of the wheat was not, in point of land cost, 100 but 102.[5]

Were all entrepreneurs, albeit of unequal abilities, yet equal in equipment of wealth, credit, and instrumental goods, and alike in adaptation to the equipment in hand, alike also in relative adaptation to alternate lines of employment, all costs would be equal in each respective line of production, and no entrepreneur more marginal than any other, or marginal at a different output of commodity product. But, even so, there would be no warrant for expecting all profits to fall to the general wages level—if such a level there were—unless it were also assumed that *all men* were equally able and equally well equipped and equally disposed to undertake entrepreneurship. With fluid and perfect competition among unlike entrepreneurs, instrument rents and time discounts would be forced to so high a level that the last dose of expense, and each instrumental good employed thereunder, would be employed at a rate of remuneration so high as barely to leave to the entrepreneur an induce-

[5] The law of costs, correctly formulated, is applicable to all things competitively produced, no matter how many scarcity goods may enter into the production process. In the accurate sense, the term *monopoly* connotes conditions of non-competition, or, in degree, of restricted competition. But, in any case, the law has no reference to the underlying influences explaining the actual cost situation; it takes the situation as it is without attempt to investigate the causes.

And even in monopoly conditions the cost law may, without undue violence, be made to cover the computation under which a restriction of output becomes advantageous. The cost law at its broadest indicates the point at which product, or added product, cancels as many price-measured facts as it adds to selling-price; production ceases at the point at which value costs are at balance against value product.

The monopoly computation applies this principle; on the credit side of the account is computed the increment of product at the new level of price attendant upon its production; to be charged against this are (1) the extra outlays of production, and (2) the loss in price suffered by the earlier items of product through the addition of the new items. The point of equation between the two sides of the account is the limit upon production.

For cost purposes, in truth, small occasion exists for any extended discussion either of monopoly problems, or of the relation of corporate

ment further to burden himself with supervision and further to increase the volume of his product. But still there would exist no warrant for asserting the equality of costs with the aggregate compensations of the productive factors, in any other sense than that competition could carry these compensations no higher. The distributive shares out of the product would be the higher for all entrepreneurs, as entrepreneur ability should be scarce relatively to instrumental goods and to employee labor. Instrumental goods of different sorts would be better paid relatively to labor or to entrepreneur ability accordingly as they were respectively in limited supply.

For it is to be remembered that, the demand for consumption good being assumed, the demand for any instrumental good or agent is conditioned by the quantum of instrumental goods or agents adapted to co-operate with it and unadapted to serve as substitutes for it. Just as it is the limitation upon the supply of productive instruments and agents that makes value possible, so

organization to the traditional theory and terminology of the science. However important and, indeed, overshadowing in modern business the phenomena of the later methods of business organization may be, not much interest attaches to them for purposes of value theory. Nor for distributive theory does great significance attach to the corporate aspects of business organization, excepting as these are, in practical affairs, associated with the monopoly feature.

As to corporations purely and simply as such, there is little greater occasion for separate treatment than for partnerships. The theoretical aspects of the new problems presented have already been sufficiently summed up in an earlier examination of the bearing of corporate organization upon the established concepts and terminology of the cost-of-production problem. (See note, p. 98.)

Monopolies also offer few difficulties of analysis so far as the effects are confined exclusively either within the field of primary distribution, the cost and value analysis, or within the field of secondary distribution; very often, however, this simplicity of effects is not present.

Particularly are the activities of the operator in the field of "high finance" difficult to distribute between the two categories of market-value productivity—primary distribution—as over against predation or parasitism—secondary distribution.

The activities of the lace-weaver, the bonnet-trimmer, the diamond-polisher, the patent-medicine manufacturer, the clown, and

it is the *relatively* limited supply of one class of productive factors that attaches to it a high remuneration relatively to the co-operating factors. The ultimate explanation for the value of any commodity, be it repeated, is found, on the one side, in the demand for the commodity, on the other, in the fact that the supply of productive means is limited, whether by the absolute scarcity of these productive facts, or by a scarcity due to the diverting influences exerted by the demand for other commodities. And the actual level of remuneration is everywhere reached through the bidding of entrepreneurs for increased productive intermediates to be added to the productive efficiency already in hand; and the actual payment is thus commonly in some rude approximation to the amount which the successful bidder is able to pay for the purpose of enlarging his production complex.

With goods present in stocks of similar items, this approximation is theoretically close accordingly as entrepreneur competition is close. Where each item of goods

the prostitute, are, in the economic sense of the term, clearly enough productive; on the other hand, the three-card-monte man, the shell-game man, and the gold-brick man, would be, at least by the naïve intelligence, ranked as agencies of secondary distribution, under methods more or less ingenious and interesting. Somewhere near the line between these two extremes are to be ranked the methods most distinctly characteristic of high finance, at all events, most notorious in connection with it.

The promoter or underwriter is in the business of producing stocks and bonds for the investment and the speculative markets; the products are commonly of considerably greater worth than those of the patent-medicine vender, and, indeed, are often of the very highest title to market recognition. Relatively small stores of instrumental wealth, much good-will or franchise or monopoly, more of prospectus and gilded promise are, under the guidance of high ability and ingenious skill of organization, combined into a marketable commodity most profit-giving to the producers, commonly, truly, of moderate advantage to the purchasing investors, and sorely disastrous to the general public. All this is hard to rule out of the category of market productivity and of productive distribution.

The later processes by which the market is rigged through bear stories and through artificially low dividends, or by declaration of unearned or bookkeeping dividends, may, as more or less reputable predation, be safely classed as entirely within the field of secondary distribution. (Cf. Veblen, *Theory of Business Enterprise, passim.*)

is *sui generis,* the room for higgling is appreciably more ample and the point of price adjustment is quite possibly found at considerably below what the successful bidder would, if necessary, have consented to pay.

With the recognition that entrepreneurs are different must come the abandonment not only of the notion that profits can arrive, in any conceivable state of equilibrium, at equality, but also of the notion that, at no matter what point of development in technique, there can ever be any one best formula for the combining of the various different factors or classes of productive agents. There is, indeed, no such best combination for any one entrepreneur, excepting upon the assumption of an established level and ratio of prices and of hires upon the different productive agents; with each change in these relative hires, that which was best becomes not best, and the production complex undergoes a reconstruction. And finally, with varying financial resources, the best combination is again a different combination. Most men are compelled to adapt their productive combinations to the conditions set by their capital and their credit; what additions or subtractions of different factors are expedient depends not so much upon what would be advantageous if the entrepreneur could command the necessary resources, as upon what he can with reasonable caution attempt.

CHAPTER XXVII

SUMMARY OF DOCTRINE

In the interests of economy of space, and to avoid the further detailed repetition of what has already been sufficiently set forth in earlier pages, the following propositions are presented:

Value is a ratio of exchange between two goods, quantitatively specified. The concept of a *general* market value depends upon the assumption of an established medium of exchange, and finds its only expression as *price.*

The primary fact in the explanation of value is the existence of human needs and desires. *Utility* as expressed in the existence of *goods* is merely the relation of adaptedness of the thing or fact to the human need or desire. Limitation upon the supply of goods relatively to the need gives value. Thus value in producible goods is ultimately explained by human desires over against a limitation of supply due either to the shortage of instrumental goods or to the irksomeness of effort or to both.

With great esteem for good singing and with the rarity of good singers, the high gains of prima donnas find sufficient explanation.

With scarce iron mines and a relatively high need for iron, a high value upon iron is readily explicable.

With relatively scant equipment of land, and a high need for wheat, the high value of wheat land would be explained, irrespective of the fact that various other uses for land further greatly restrict the supply of wheat land.

Human needs and their relative intensity being assumed, the value-causal sequence runs from relative scarcity of agents to relative scarcity of products; from relative scarcity of products to high exchange power of products—

high value, relatively high price; from relatively high price of products to relatively high remuneration of agents; from relatively high remuneration of agents to relatively high present worth of agents.

Under the competitive activity of various and differing entrepreneurs, each seeking his most advantageous line of activity in view of his particular situation in point of capital, credit, ability, and preference, market supplies of products are worked out in adjustment with the price demand; and under the competitive bidding of entrepreneurs for productive auxiliaries, the market values of instruments and agents are worked out, and the cost situation confronting each individual entrepreneur determined.

That underlying the competitions and costs of entrepreneurs is a situation, a controlling complex of fundamental facts, under the influence and direction and determination of which the details of market production and of value adjustment take place, and with changes in which most commonly take place changes in the resulting market adjustment, furnishes us with the principle from the point of view of which must be examined *the dynamics of value and of distribution,* a group of problems having to do with the manner and degree of change in market adjustments attendant upon different probable or possible changes in the underlying situation.

Neither in utility on the demand side nor in pain cost on the supply side can there be found a common denominator or standard or determinant of market value, or of price as its money expression. The only common denominator of value is found in the selection of a conventional standard for the purpose, a price commodity.

Neither in terms of market-value equivalence nor in terms of pain or cost, but only in terms of

utility equivalence is to be sought the standard of deferred payments. Equivalence in terms of unspecialized purchasing power, expressed under some conventional price standard, is the only resource for the case.

The equation of demand with supply is an explanation for value only in the sense that the entrepreneur-cost situation and the condition of price demand reflect and express the effects of the underlying and determining situation. Therefore both demand and supply themselves require analysis and explanation.

DEMAND

Utility, marginal utility, and *subjective worth* are primarily categories leading up to the explanation of the demand side of the value equation, as expressed in terms of purchasing power, and as bearing upon the price adjustment of any particular commodity.

Marginal utility—a purely individual category and an absolute magnitude—is a step toward explaining subjective worth—a purely subjective and individual fact and an absolute feeling magnitude, the cost aspect of marginal utility. Two subjective worths in comparison explain price offer, or refusal price, this latter being merely a demand fact in another aspect.

To different men, utilities, marginal utilities, and subjective worths are, as such, incapable of comparison; nor is it possible to give to utility, marginal utility, or subjective worth expression or measurement in terms of money. A maximum demand price expresses merely the equivalence, in point of subjective worth, of the thing bid for and the thing otherwise to be obtained through the purchasing power.

COST

The emergence of value is not dependent upon cost-of-production influences as a prerequisite, but only upon there

being a supply limited relatively to human desires. But so far as the cost-of-production investigation bears to explain the relative volumes of supply of different commodities, it bears to explain the values of these commodities.

For competitive purposes, cost of production is purely a computation of the individual entrepreneur; for any item or quantum of product, it is the price statement of the compensation necessary to the forthcoming of that product.

Outlay costs to the entrepreneur are distributive shares to the recipients; the distributive share of the entrepreneur also—his profit—is cost, to the extent that it is necessary profit.

But the distribution that takes place under the production process and as part and parcel of it, is not the only distributive process in society. Such incomes as are received otherwise than by title of separate or co-operative productivity, find their explanation in those other social facts and forces which distribute purchasing power in society.

All productive-distributive compensations come by the same and equal title of contribution to value productivity; but they are the market value of the value contribution rather than the accurate equivalent of the value productiveness; this last varies for each instrument with each entrepreneur, and is nowhere precisely ascertainable by any.

Only relative costs of production have to do with the exchange relations of goods.

All influences making to increase the indemnity-price total which a commodity must afford to its producer if it is to be produced, rank, under the price denominator, as costs; chief among these influences is commonly opportunity cost—demand in another direction functioning as resistance in the given direction.

The resistance attractiveness of recreation or of rest may also be included within the opportunity-cost concept if interpreted broadly. Instrument and agent costs are often accurately to be reckoned as costs only in this opportunity aspect.

As a cost concept capital is neither technological nor social in significance; it stands for the total invested fund of value, inclusive of all instrument values, and of all general purchasing power devoted to the gain-seeking enterprise; it is an acquisitive category.

For competitive purposes, the capital concept should be formulated in the individual, private, and competitive sense. It should include all things, facts, or rights having value so that to them abstinence—the postponement of consumption—applies. Capital in this sense is a private fund of wealth expressed under the price denominator and viewed in the time aspect. The market value of any basis of income is the present worth of its entire series of putative incomes.

Market time—discount—interest in the accurate and ultimate sense—is the premium, expressed as a rate per cent. per unit of time, which any fact, as present purchasing power expressed in terms of the conventional standard, commands over future purchasing power likewise expressed.

The surplus in any instrument hire over upkeep or depreciation is a market time-discount fact; expressed as a ratio between the value of the instrument and the hire, it is interest in the accurate sense.

All costs are merely sacrifices of production reduced to terms of the price denominator. Costs, then, include, among other items, all necessary indemnities for capital outlays in production, and a time-discount charge upon the capital fund invested.

But the cost to the individual entrepreneur is not a fundamental explanation of anything; it assumes values upon instrumental facts as a step toward value explanation. Nor does the aggregate activity of entrepreneurs explain the cost conditions facing each, unless and until the great underlying facts of human wants and capacities, and of instrumental equipment and opportunity are included in the survey.

Static-value analysis takes as definitive and ultimate the actually existing total situation, inclusive of human needs and productive powers, and with all the existing supplies and existing limitations of equipment and opportunity, and all this irrespective of how far the situation is due to an original bounty or to an original inadequacy, and irrespective of whether human activity has in the past added or subtracted relevant elements, aspects, or facts. Not the outlays for productive facts, or these same outlays regarded as incomes, but the scarcity of these productive facts relatively to the human need, is responsible for the emergence of scarcity of products anywhere and for the relative scarcity of products which underlies and explains exchange relations.

But the inadequacy of the general equipment does not explain the market values of any particular line of products, that is to say, the exchange relations beween different classes of goods. Inside the general situation of inadequacy of productive factors must be worked out the relative inadequacy of productive equipments for the various lines of commodities, in view of the relative strength of the purchasing power disposable in these various commodity directions. Here enter the influences of various different lines of production to restrict the supplies of productive factors in each particular line of industry.

All rent outlays, whether for land or for other instrumental goods, and all wage outlays and all discount charges upon the capital fund employed in production are equally to be included within costs of production as an intermediate explanation of the supply side of the value equation.

Nowhere is the distinction between price-determining and price-determined costs valid. In the main, the value of each productive fact is value-determined; but as part of the supply of productive facts, each is, through its products, in its small measure, a value-affecting influence. So also each individual activity bearing upon price or related to price, whether, on the one hand, of production or of sale offer, or, on the other hand, of price offer or of price refusal, is, in the main, price-determined, because chosen in view

of the actual price situation and in adaptation to this situation; but each such activity, as affecting in its own small measure the aggregate of supply or of demand, must thereby and *pro tanto* act as a price-determining influence.

The only one of the several rent concepts important to the cost analysis is that of the actual hire; but as opportunity cost, the land or any other productive fact may figure as cost at something vaguely more than the actual hire paid.

Costs to the entrepreneur are mostly but not entirely traceable (1) to value serviceability to entrepreneurs in other lines of production, or (2) to value serviceability to entrepreneurs in the same line of production, or (3) to alternative value possibilities of the productive facts, inclusive of the entrepreneur's own productive power, when under his own employment. But pain and weariness and displaced recreation have also their place in fixing the total remuneration necessary to the forthcoming of product.

All margins are ultimately personal and not instrument margins. Instruments are marginal only with reference to the entrepreneur and relatively to him and to his situation; marginality is a psychological attitude with reference to productive activity or to the productive employment of instruments.

Marginal instruments are variously understood to indicate (1) valueless instruments, a market-value standing, not inconsistent with the rendering of services for which the user would, if necessary, pay an appreciable hire; (2) instruments having neither market-value nor personal-value significance; (3) instruments which at the actual market charge are just barely worth employing by the actual employer.

Number one is a concept derivative from the relationships of instrumental goods to entrepreneur activity, but not necessarily giving a precise expression to any one of these relationships. Numbers two and three are meaningless excepting in terms of relativity to entrepreneur activity. Marginality is, in last analysis, an entrepreneur attitude with relation to one's own productive activity or to the productive efficiency of agents and instruments.

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